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# WINGED WARRIORS:

## THE HISTORY OF ARMY NATIONAL GUARD AVIATION, 1948-2008

by Michael D. Doubler

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Army National Guard
Aviation and Safety Division
(NGB-AVS)

# CONTENTS

## WINGED WARRIORS: THE HISTORY OF ARMY NATIONAL GUARD AVIATION, 1948-2008


Foreword by Director, ARNG iii

Acknowledgments iv

Chapter 1: Early Aviation Origins, 1908-1947 1

Chapter 2: The Rise of ARNG Aviation, 1948-1969 15

Chapter 3: The Era of Total Force Policy, 1970-1989 43

Chapter 4: War and Peacekeeping, 1990-2000 81

Chapter 5: The Global War on Terrorism, 2001-2008 107

Chapter 6: Conclusions 140

Appendix A: AAAA ARNG Aviation Unit of the Year Recipients 150

Appendix B: Division Chiefs, ARNG Aviation and Safety Division 152

Glossary 154

Selected Bibliography 156

# FOREWORD

*Winged Warriors: The History of Army National Guard Aviation, 1948-2008* tells the dramatic story in words and pictures of the evolution and contributions of citizen-soldier aviators. Over the past sixty years, ARNG aviation has established a reputation as the best reserve component military aviation organization in the world.

*Winged Warriors* in a very real sense is the story of the men and women of ARNG aviation and their machines and facilities. From those World War II veterans who flew light, fixed wing aircraft to today's men and women who are piloting the world's most advanced helicopters in combat, professionalism and superior airmanship have been the hallmarks of ARNG aviators. On the ground, maintenance personnel have always exhibited the same level of professionalism and technical expertise. Aviation technology has advanced greatly since 1948, and the ARNG aircraft fleet has changed over time as well, with more modern and capable aircraft always entering the force. The training and logistical support tail for any successful aviation force is considerable. ARNG flight training sites and maintenance shops across the nation have established a reputation for excellence and noteworthy technical expertise.

As the U.S. Army's premier combat reserve aviation component, citizen-soldier aviators have been called upon to fight in most of America's armed conflicts since World War II. Starting with the mobilization for the Korean War and through the events of the past few years, the ARNG aviation force has deployed worldwide to defend the nation's vital interests. The campaigns in Afghanistan and Iraq have especially required ARNG aviators to become full participants in the Army's aviation team. The wartime service of ARNG aviation dramatically shows that it is not only a vital portion of America's first line of defense but that the country simply can not go to war without it.

ARNG aviation has been equally important at home. The speed, mobility and flexibility of military aviation make it an essential first responder following natural disasters and manmade emergencies. ARNG helicopters have become an iconic image in the public mind as angels of mercy delivering immediate aid in times of distress. The nation will not soon forget the dramatic images of ARNG helicopters coming to the relief of stricken survivors following Hurricane Katrina in 2005. Since the attacks of September 11, 2001, ARNG aviators have acted to boost homeland security, especially along the nation's borders and at select public events.

*Winged Warriors: The History of Army National Guard Aviation, 1948-2008* is an informative and educational account of ARNG aviation's roles in providing for the country's defense and in preserving the lives and protecting the property of the American people. It is the first comprehensive branch history the Army Guard has ever published. As such, may it inspire all of us in the ARNG to continue to stand watch over our nation, as we have done for the last 400 years.

GARRETT P. JENSEN
COL, AV
Chief, Aviation and Safety Division

# ACKNOWLEDGMENTS

The recording in words and images of the evolution and contributions of the ARNG aviation force has required the participation and cooperation of many institutions and individuals. The ARNG Aviation and Safety Division (NGB-AVS) has provided invaluable support throughout the project. Above all, Bob Godwin, the Deputy Division Chief, had the vision to see that an ARNG aviation history was needed and exhibited unwavering support and patience throughout the project. Similarly, Tom Petrick, experienced ARNG aviator and program analyst in NGB-AVS, was always patient in answering my many questions, especially during research trips to the EAATS and WAATS. Ray Engstrand, a true pillar of ARNG aviation maintenance, was very gracious in organizing and accompanying me on trips to the 1108th AVCRAD and the sites of the Aviation Division's former headquarters buildings at Edgewood, Maryland. NGB Historical Services, especially Bill Boehm, helped in providing key research materials.

Beyond the National Guard Bureau, a number of different groups provided essential support. The U.S. Army Aviation Museum at Fort Rucker, Alabama, provided a number of photographs. Similarly, John Bernstein, the Director of the National Guard Educational Foundation, was very generous in providing important images and documents. My understanding of the ARNG aviation force was greatly enhanced during on-site visits and special interviews. Research trips to the EAATS and WAATS were especially valuable. Two days of flying along the Southwest border in an ARNG Black Hawk near the close of Operation Jump Start in the summer of 2008 reintroduced me to the thrill of flight operations, while researching another project for NGB. Of even greater historical value was a series of interviews conducted with select, key personnel, many of whom were pioneers in the creation of the modern ARNG aviation force. A full listing of those who graciously agreed to interviews is included in the bibliography.

A number of individuals provided vital assistance during research, writing, and final production. As usual, John W. Listman, Jr., provided invaluable support in collecting photographs and superbly organizing research materials. Blanche Kapustin did her normal, thorough work in editing the manuscript. John Doubler of Creative Endeavors in Clarksville, Tennessee, applied his considerable talents as an artist to create a very attractive layout and design format for the final book. A special thanks goes to Doug Hartman of Hartman Historical Services in Omaha, Nebraska, for allowing the use of key images. A number of states were forthcoming with historical documents and photographs, especially Arizona, Kentucky, Nebraska, Ohio, Pennsylvania, Texas, Utah and Virginia.

My goal at the start of this project was to produce the very best branch history of a U.S. Army combat arm ever written and published. I will leave it to others to determine if that goal has been achieved. However, because of the help of so many others, I have to believe that the original goal has been attained. In the end, my real hope is that *Winged Warriors* brings to the men and women of the ARNG aviation force, both past and present, the special recognition and thanks they so well deserve.

Michael D. Doubler

# CHAPTER ONE

## EARLY AVIATION ORIGINS, 1908-1947

Even before the dawn of powered flight, citizen-soldiers took great interest in the use of aerial observation for military purposes. After the advent of military aviation in the United States, the National Guard sought opportunities to establish its own military aviation program. When the War Department refused to provide aircraft or training to the states for fear of draining resources from its own embryonic flight program, citizen-soldiers forged ahead on their own to organize units, acquire aircraft and undergo training. From the very beginning, National Guard aviators flew in support of domestic state missions, and when the nation went to war, they became an integral part of the war effort. The history of U.S. military aviation from the Balloon Corps of the Civil War to the outbreak of World War II is the common heritage of Army aviation and the U.S. Air Force (USAF). The establishment of organic Army aviation in June 1942, and its service during World War II, set the stage for a separate Army aviation program in the National Guard in the postwar period.

### The Beginning of Military Aviation, 1908-1918

Citizen-soldiers were among the first to exploit the advantages of military aviation. In June 1861, two militiamen from Rhode Island, James Allen and William H. Helme, made the American military's first ascent in a tethered balloon. During the launch from an encampment near Washington, DC, at the start of the American Civil War, the militiamen observed Confederate forces deployed across the Potomac River in northern Virginia. The aerial mission by two Rhode Islanders marked the advent of aviation in the Army and the National Guard.

For two years afterward, the Union Army maintained a Balloon Corps which enjoyed only limited success. Balloonists assisted commanders by observing Confederate troop movements, and at one point, a balloonist directed Union artillery fire through a telegraph connection with the ground. The end of the Civil War dampened enthusiasm for military ballooning, but in 1892, the U.S. Army Signal Corps established a Balloon Section. Early experiments resulted in the first use of ground to air telephonic communications. During the Spanish-American War, an Army balloon made several observation flights in Cuba before it was brought down by enemy fire during the battle of San Juan Hill.

Citizen-soldiers had been interested in military ballooning since the American Civil War. An observation balloon of the Ohio Field Artillery being deployed while the regiment was stationed at Fort Bliss, Texas, during the Mexican Border Crisis of 1916. *National Guard Educational Foundation*

The Wright brothers' dramatic first flight at Kitty Hawk, North Carolina, in 1903 rejuvenated the Army's interest in the uses of military aviation. In 1907, the Signal Corps established an Aeronautical Division "to study the flying machine and the possibility of adapting it to military purposes." The Signal Corps worked closely with the Wright brothers as civilian contractors to acquire the first military aircraft and trained pilots.[1]

In September 1908, the Wright brothers conducted tests of a Wright flyer modified for military use at Fort Myer, Virginia, flights that are recognized as the dawn of U.S. military aviation. On September 17, the trials ended in tragedy with the first fatality in a plane crash. 1st Lt. Thomas E. Selfridge was killed and Orville Wright severely injured when a propeller shattered in flight, causing the plane to fall from an altitude of seventy-five feet.

Pvt. Beckwith Havens became the Guard's first certified pilot when he was licensed in 1912. He was later an original member of the New York Guard's 1st Aero Company when it was organized in 1916. *National Guard Educational Foundation*

Fortunately, the crash did not stymie the development of military aviation. The following year, the military purchased its first aircraft and established its first airfield and flight school at College Park, Maryland. Flight training began at College Park in October 1909, and by a quirk of fate, an officer who would rise to prominence in the New York National Guard became the first Army aviator. On October 26, Wilbur Wright gave three hours of flight instruction to Lieutenant Frederick E. Humphreys before declaring that the officer was ready to "take her up on your own." Humphreys made three solo flights of varying length, and afterwards, Wilbur Wright pronounced him "a certified pilot."[2]

In 1912 Lt. Col. Charles Winder of Ohio became the first Guard pilot to graduate from an Army aviation flight school. After earning a Reserve Military Aviator rating, he purchased his own plane and brought it to drill to teach other members of his unit to fly. *National Guard Educational Foundation*

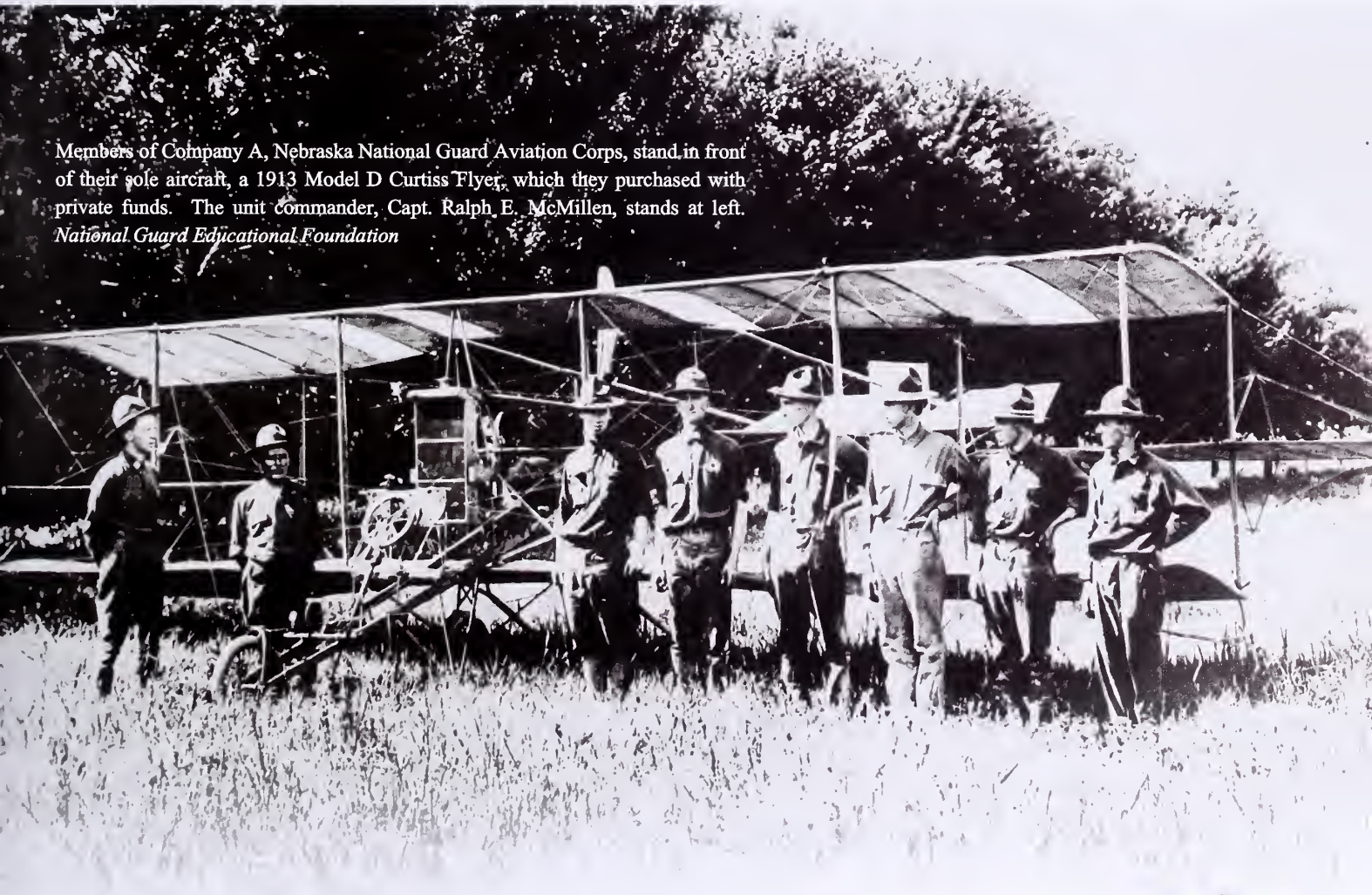
With the advent of aircraft and pilots in the Regular Army, interest in military aviation grew throughout the National Guard. In most cases, state funds and resources were not available, and Guardsmen used personal monies and private funding to advance military aviation. As a rule, state soldiers were just as interested in developing commercial aviation interests as they were military aviation. Guardsmen often outpaced the efforts of their active duty counterparts in developing aviation because the War Department restricted funding or limited innovation in federal programs due to bureaucratic risk aversion. In 1907, California established an aeronautical squadron to test the military uses of balloons and aircraft. The following year, New York activated its 1st Aero Company, widely recognized as the National Guard's first, genuine flying unit. By the end of 1910, Wisconsin, Missouri and Illinois had created their own aero squadrons.

In 1911, the Curtis Aeroplane Company loaned

New York's 1st Aero Company an aircraft and a pilot named Beckwith Havens. He later joined the unit and was recognized as the National Guard's first aviator. In August 1911, 1st Lt. Andrew Drew of Missouri became the first person to receive a private pilot's license while serving in the Guard. The first licensed aviator to join the Guard was 2nd Lt. Eugene B. Ely from California. In early 1911, prior to joining the California Guard, Ely had gained national notoriety and made aviation history by landing and taking off a Curtis biplane from the deck of the cruiser USS *Pennsylvania* in San Francisco Bay. Sadly, Ely was killed in a crash at Macon, Georgia, in October 1911, the first National Guard aviator to be killed in an aircraft crash.[3]

Despite successes in the states in forming flying units and training pilots, the relations between Guard aviators and the War Department remained strained. Desiring to husband resources for its embryonic federal aviation program, the War Department was loathe to expend resources and funds on the Guard. When Michigan aviators failed to get an aircraft through state resources, they wrote to the chief of the Signal Corps to obtain a plane from the Army. In response, the Signal Corps informed Michigan that "aeroplanes are not available for issue to the Organized Militia." When Nebraska failed to receive federal funding for aircraft in 1915, militiamen built their own planes toward the activation of a flying unit.

The War Department took a similar attitude in the training of Guard pilots and mechanics. In September 1912 the commander of the Aviation School at College Park recommended that militia officers not be permitted to attend the school because it could not provide instructors, aircraft and spare parts for state soldiers. Despite frequent attempts to obtain aviation training for National Guardsmen at Army schools, it was not until late in 1915 that militiamen were permitted to attend flight training.



Members of Company A, Nebraska National Guard Aviation Corps, stand in front of their sole aircraft, a 1913 Model D Curtiss Flyer, which they purchased with private funds. The unit commander, Capt. Ralph E. McMillen, stands at left. *National Guard Educational Foundation*

What did it take to become a military pilot in those early years? For those Guardsmen unable to attend a military flight school, the War Department in 1916 established a flying test and other criteria they had to meet in order to earn their flight wings. The exact performance flying tests included:

1) Fly five figure 8s around pylons keeping all parts of the machine inside a circle whose radius is 300'.
2) Take off from a rectangular field 1,200' by 1,200' and attain an altitude of 500', keeping all parts of the machine inside the rectangle during the flight.
3) Climb to 3,000', cut off motor, spiral down, changing direction of spiral—that is, from left to right and right to left—and land within 150' of a previously designated mark.
4) Land with dead motor in a field 800' by 100', assuming said field to be surrounded by a 10' obstacle.
5) From 500' altitude land within 100' of previously designated point with dead motor.
6) Cross country triangular flight without landing of approximately 60 miles.
7) Straightaway cross-country flight without landing of at least 90 miles.

In addition to flight skills, military pilots had to prove a mechanical mastery of their aircraft by demonstrating the ability to perform all maintenance and repairs. They also had to possess the theoretical knowledge inherent in the operation of their engines, carburetors and magnetos. Working knowledge of the weather was also essential, as was a demonstrated mastery of navigation techniques using compass and map and the art of navigation by terrain association.[4]

The War Department also established criteria for the activation of National Guard flying units. An aero company could get probationary federal recognition if at least four of its six officers were licensed as military pilots and the unit included twelve fully trained enlisted mechanics. The outfit needed a suitable airfield and at least one serviceable aircraft. Planes could be owned by the state or donated or on temporary loan to the Guard by wealthy individuals and groups. Regardless of the source of the aircraft, the state had to retain the right to schedule, control and regulate all flights.[5]

In 1916, deteriorating relations with Mexico required increased security along the Southwest border. Active duty aviators performed America's first aerial observation and reconnaissance missions during border operations. Much of the National Guard was ordered to active duty during the Mexican Border Crisis of 1916. In the summer of that year, New York's 1st Aero Company became the first National Guard flying unit ordered to active duty. However,

Mobilization day for New York's 1st Aero Company during the Mexican Border Crisis. Its three aircraft were all donated or purchased with private funds. *National Guard Educational Foundation*

On January 17, 1921, Minnesota's 109th Observation Squadron was the Guard's first post war aviation unit to receive federal recognition. It was issued Curtiss Orioles and JN6H "Jennys." *National Guard Educational Foundation*

instead of serving in the Southwest, the unit remained in New York. A lack of funds and spare parts inhibited unit training, but the real problem was a shortage of mechanics. The only thing that kept planes flying were paid civilians who maintained the aircraft.[6]

America's entry into World War I in April 1917 greatly spurred the growth of military aviation. At the time, the Army's aviation force included 131 officers and 1,000 enlisted men. Of the entire force, only seventy-eight officers had received any flight training, and none had combat experience. However, the American Air Service on duty in France comprised nearly 200,000 officers and enlisted men before the war ended. No established Guard aero units were mobilized for World War I. However, the pilots and mechanics in those units were ordered to active duty and served in France as individuals assigned to other units. Four pilots became air combat aces, and Erwin R. Bleckley of Kansas, an aerial observer, became the first National Guard aviator to receive the Medal of Honor, the nation's highest award for valor.[7]

## The Interwar Period, 1919-1941

After World War I, aviation units won favorable consideration, and in 1920, the War Department announced plans to include flying units in National Guard combat divisions. Within two years, nine aircraft were authorized for each flying unit which was designated as an

A Douglas O-2H of New Jersey's 119th Observation Squadron, assigned to the 44th Division, circa 1930. The unit was still flying these aircraft when it rendered aid to civil authorities in the search for survivors of the ocean liner *Morro Castle* which sank off the New Jersey coast in 1935. *National Guard Educational Foundation*

# Col. Charles A. Lindbergh

Charles Augustus Lindbergh was born in Detroit, Michigan, in 1902. Because his father served as a member of Congress, Lindbergh spent much of his youth in Washington, DC. His love for aviation took root when he observed Army aviators flying experimental aircraft at nearby Fort Myer, Virginia.

Too young to join the Army for World War I, he enlisted in the Air Corps in 1924. Afterwards, he joined the Missouri National Guard's 110th Observation Squadron. There he served as pilot, flight commander and parachute officer. By the time of his famous flight, Lindbergh was a senior pilot in the Missouri Guard with the rank of captain. He always retained fond memories of his years as a Guard aviator.

On May 20-21, 1927, Lindbergh piloted the *Spirit of St. Louis* from New York to Paris in the first solo, non-stop crossing of the Atlantic. For his tremendous feat, Congress awarded "The Lone Eagle" a special non-combat Medal of Honor. Afterwards, he transferred to the Army Air Reserve with the rank of colonel, retiring in 1933.

With the approach of World War II, Lindbergh's reputation suffered in the eyes of the public. He was an outspoken advocate for the isolationist movement to keep American out of the war. His admiration for Germany's civilian and military aviation programs branded him as a Nazi sympathizer.

However, when the war came, Lindbergh was employed as an engineering consultant by the United Aircraft Company, which built the Navy's F-4 Corsair fighter plane. In this civilian capacity, he flew as many as fifty missions, often logged as test flights against the Japanese in the Pacific. He was credited with at least one kill in combat. In 1954, he was appointed as a brigadier general in the Air Force Reserve.

Later in life, Lindbergh remained active as an aviation consultant and environmentalist. He died in Maui, Hawaii, on August 24, 1974, and is buried there. The Lone Eagle remains America's most renowned aviator and the most outstanding example of the best airmanship abilities and technical expertise of citizen-soldier pilots.

"observation squadron." Only six of the seven squadrons first authorized received aircraft due to a lack of adequate hangar space in one state. The fielding of the two-seater Curtis JN6H resulted in the National Guard receiving fifty-two of the newer aircraft.

By 1923, the National Guard was authorized eight observation squadrons, with all but one squadron assigned to the divisions. By the end of the decade, the number of observation squadrons had grown to nineteen. Aircraft pilots participated in training exercises to hone their skills for combat, but Guard aircraft also took part in state missions. In 1924, Minnesota reported that the observation squadron assigned to the 34th Division flew spotter missions in search of forest fires. In the South, Alabama's 39th Observation Squadron patrolled the state's railway system in support of law enforcement. In 1927, the same year that Charles Lindbergh made his famous nonstop flight between New York and Paris, state aviators in Arkansas, Colorado and Tennessee flew missions to bring aid and assistance to disaster-stricken communities.

By modern standards, National Guard flying programs were very informal. Pilots rarely filed flight plans, and cross-country trips and night flying were uncommon. In the early 1920s, the average state pilot logged about four hours of flight time each month, but by the middle of the 1930s, the typical pilot was logging about one hundred hours each year. Aviators conducted forty-eight drill periods annually. Instead of drilling one weekend per month, they met on two Sundays and two Wednesday evenings each month. Sunday drills were reserved for flying,

As the 1930s drew to an end, the Guard began modernizing its air fleet, replacing the fabric-covered Douglas O-38s with the new, all-metal O-47. Both of these planes belonged to the 110th Observation Squadron, Missouri National Guard. *National Guard Educational Foundation*

while Wednesday night sessions consisted of classroom instruction.[8]

Despite the economic challenges of the interwar period, the National Guard managed to press ahead with aircraft modernization and other technical improvements. In September 1927, the Guard finally shed its last fabric and wood aircraft. World War I era engines left the system by the mid-1930s, replaced by more powerful and reliable systems. Though they were often slow to appear, shiny, aluminum aircraft like the O-38 and O-47 eventually filled the observation squadrons.

Technical advances in aviation and its military uses, especially among light aviation, were taking place in Europe and Asia as well. These developments raised eyebrows among U.S. military planners. A Texas Guardsman was the first American to demonstrate the feasibility of light aviation in direct support of ground forces. 1st Lt. Joseph McCord Watson was serving as the supply officer of the 61st Artillery Brigade, 36th Division, when he first envisioned the use of light aircraft as an artillery observation platform. A private pilot since 1928, Watson enlisted the aid of

The second member of each Douglas O-38B had two missions; the first was to observe enemy positions on the ground, often with the aid of an aircraft mounted camera, and the second to defend the plane from rear attack with a .30 cal machine gun. The emblem is for the 102nd Observation Squadron, New York National Guard. *National Guard Educational Foundation*

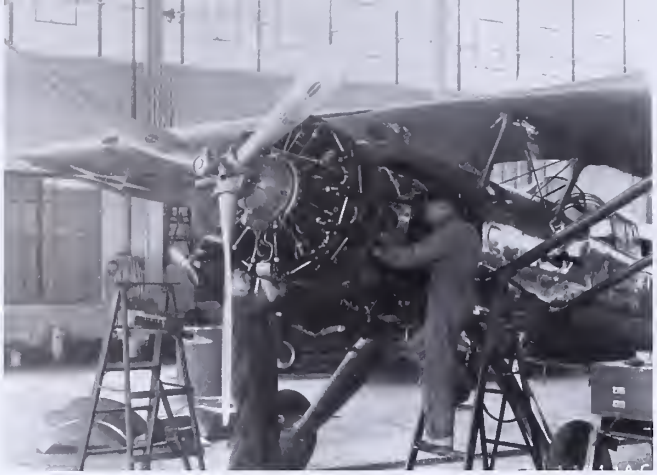
## North American O-47

During the 1920s and early 1930s, Guard observation squadrons had flown mostly fabric covered biplanes with their crews exposed to the elements in open cockpits and fixed landing gear reducing their speed and performance. However, that changed with the introduction to the Guard of the North American O-47A/B model aircraft starting in 1937.

The O-47 was an all-metal monoplane with an enclosed cockpit for its three-man crew and retractable landing gear. Powered by a Wright R-1820 engine producing 1,060 horsepower, it had a cruising speed of 220 mph, a range of 840 miles and an operational ceiling of about 21,000 feet. The B models had more powerful and better cooled engines and improved radio equipment. Observations and aerial photography were performed by the center crew member looking through windows in the belly of the plane.

Armament consisted of one wing-mounted .30-caliber machine gun and one flexible .30-caliber machine gun operated by the rear observer. Those aircraft assigned to antisubmarine patrol were adopted to carry two 325-pound depth charges.

Of the 239 O-47s purchased by the Army by 1940, 113 were assigned to Guard squadrons, by far the most common airframe when state flying units entered active duty in 1940.



Qualified maintenance personnel are essential in sustaining any flying unit. Mechanics of the 118th Observation Squadron, Connecticut National Guard, work on an O-46A, circa 1937. *National Guard Educational Foundation*

Capt. John K. Burr, a fellow officer in the brigade, to assist him with aerial experiments during the summer of 1936.[9]

During drills, the two Guardsmen drove to San Antonio's Stinson Field, rented a Cub aircraft, mounted radios in the plane, and took to the sky. Flying at less than 1,000 feet and at speeds around 60 mph, the two conducted a series of tests that convinced them pilots could spot targets, perform artillery adjustment, conduct ground reconnaissance and relay all necessary information to ground stations by radio. While the professional military journals of the day carried articles calling for the creation and use of light aviation units, two Guardsmen, Lieutenant Watson and Captain Burr of Texas, were busy demonstrating that the concept of supporting ground units with light aircraft was both feasible and practical.[10]

The outbreak of World War II in Europe and Asia prompted the mobilization and expansion of the U.S. military starting in 1940. By that time, the National Guard had twenty-nine observation squadrons that included 4,800 aviation personnel. All of these were ordered to active duty and became part of the Army Air Forces (AAF). Many flying units received new aircraft and unique missions, including coastal defense; others retained their role and mission as observation organizations. Other state aviators and aviation support personnel served as training cadres or as individual replacements to help form new units for the rapidly expanding AAF. In all cases, Guard aviators played significant roles by defending the country and helping to prepare it for the conflagration that started with America's entry into World War II.

With world tensions rising in the late 1930s, the need grew for more Guard pilots. Prospective pilots were sent to Army flight schools where they trained on the North American Aviation BC-1 (later redesignated as the AT-6 Texan) two-man trainer. Tens of thousands of military pilots received their first flying experience in the AT-6. *National Guard Educational Foundation*

During the mid-1930s the Guard flew a number of different observation aircraft, such as the Douglas O-38B (foreground) and the O-43 to its right. These planes belonged to the 116th Observation Squadron, 41st Division, Washington National Guard. *National Guard Educational Foundation*

## The Birth of Army Aviation

Well before the attack on Pearl Harbor, Germany, Italy and Japan had produced and placed into action large fleets of bombers and fighters. These aircraft produced dramatic results starting in Asia in 1936 and in Europe in September 1939. In addition, the German Army fielded a large force of light, tactical aircraft that flew command and control, observation and communications missions in support of attacking columns of panzers and infantry.

The benefits of the battlefield uses of light aircraft were not lost on the U.S. military. The most convincing case for light aircraft employment came from the field artillery, emboldened by the success of preliminary tests in Texas in 1936. On a modern, mechanized battlefield of rapid movement, aerial forward observers in light aircraft could provide field artillery fire direction centers with accurate, current information to permit constant fire support to advancing ground forces. The Army was not predisposed toward fixed wing aircraft, being open to the possibilities of helicopters and even autogiros. However, the helicopters of the day were largely experimental, and it was believed that fixes to various technical problems might take too long considering the fast approach of war. For the time being, the Army was content to employ light, fixed wing aircraft to meet its tactical aviation needs.

The main opposition to the Army's use of light aircraft came from the AAF. The senior leadership of the AAF, including General Henry H. "Hap" Arnold, believed fabric, light aircraft could not survive on the modern battlefield and that new, sleek aluminum fighters and bombers would better meet the Army's varied needs for air support. Arnold feared that a fleet of light aircraft would create a "separate Air Force in the Army," a notion that he called "unthinkable." Furthermore, General Arnold bristled at the notion that the AAF should expend precious monies on the purchase of light, organic aircraft, only to turn them over to ground troops.[11]

During First Army maneuvers held at Fort Drum, New York in 1940, Pennsylvania's 103rd Observation Squadron, 28th Division, stages a mock aerial attack on members of the division's ground forces. Joint operations would become a hallmark of combat in World War II. *National Archives and Records Administration*

However, Army aviation had strong supporters in the War Department, including Army Chief of Staff General George C. Marshall. At an important meeting in January 1942, only weeks after America's entry into World War II, General Marshall opined that armored and motorized divisions should have "puddle jumper" aircraft of their own and that the Army should have "a few squadrons" of light aircraft as a central reserve that could be parceled out to combat divisions as needed. As a new brigadier general in the War Plans Division, Dwight D. Eisenhower was a big supporter of field artillery aerial observers.[12]

William T. Piper, Sr., the head of the Piper Aircraft Corporation, was the most significant civilian advocate for Army aviation. A shrewd businessman and ardent self-promoter, Piper provided the leadership that made his company the nation's dominant light aircraft manufacturer

Mechanics work on a Stinson L-5 in the China, Burma, India Theater in 1945. *Army Aviation Museum Collection*

during the 1930s. A veteran of the Spanish-American War and World War I, Piper genuinely believed in the potential of Army aviation and that his company should produce the required aircraft. Piper was eager to see his commercial, bright yellow J-3 Cub aircraft sporting Army olive drab and carrying out military missions. His experience as a combat veteran during two wars gave him maximum credibility with Army leaders. In an economy still suffering from the lingering effects of the Great Depression, Piper's argument that military light aircraft production could sustain America's industrial base and keep skilled workers employed carried much weight with Congress. A recognized marketing genius, Piper established a precedent of civilian defense contractors supporting and promoting Army aviation while manufacturing the aircraft and support equipment the military required.[13]

Maj. Gen. Mark W. Clark was the biggest supporter of Army aviation and successfully championed the cause from concept to reality. As the chief of staff of the Army Ground Forces (AGF), Clark closely followed experiments and tests of the artillery aerial observer concept. An infantryman, General Clark was also interested in other missions that light aircraft might perform. A personal ride in a light aircraft at Camp Blanding, Florida, in April 1942 further excited Clark about the future of Army aviation. With support from commanders in the field, Clark forwarded a memorandum to the War Department urging the formation of light aircraft in the ground forces. The War Department endorsed the plan, and light organic aviation was established on June 6, 1942, the recognized birthday of Army aviation.[14]

## Army Aviation in World War II

As a result of the War Department's approval, two Cub-type aircraft, two pilots, and one mechanic were authorized in each field artillery battalion and division artillery headquarters as well as in each field artillery brigade or group headquarters. The allocation of aircraft, pilots and mechanics also extended to the National Guard divisions and field artillery units mobilized for the war effort. The directive also established the first military flight school for the AGF at Fort Sill, Oklahoma.

In November 1942, Capt. Ford E. Allcorn became the first Army aviator to fly a combat mission when he led a flight of three L-4 aircraft from the deck of the USS *Ranger* during the invasion of North Africa. Near shore, the aircraft became separated when they took evasive action against friendly fire from the ground. Captain Allcorn was subsequently shot down, becoming the first Army aviator to be shot down and wounded in combat.

Combat commanders and aviators were anxious to employ their aircraft, and new missions for tactical aviation soon emerged. Despite their vulnerability to occasional ground fire, light aircraft proved extremely versatile and flexible as observation platforms, not only for the field artillery but for the other combat arms as well. The rugged and reliable L-4 Grasshopper became the mainstay of Army aviation in World War II. By 1943, aviators were flying supply, communication, surveillance and reconnaissance missions in both Europe and the Pacific. Evacuating wounded soldiers by ground during savage combat in remote Pacific jungles proved nearly impossible. In response, aviators innovated techniques for landing and taking off in dense jungle locations to evacuate the wounded. The light aviation force grew to approximately 2,500 aircraft, the equivalent of twenty-five planes assigned to each combat division in the Army.

A Piper L-4 Grasshopper from California's 115th Tactical Reconnaissance Squadron awaits take off from a clearing in the Burma jungle in 1945. Under its wings are mounted supply bundles that can be dropped without the aircraft landing. *NGB*

One pilot who demonstrated the uses of light aviation in combat was Joe Watson, the same Texas Guardsman who had conducted his own groundbreaking flight tests years earlier. At the start of the war, Watson was an artillery instructor at Camp Bowie, Texas, but in the summer of 1942, he volunteered for flight school. In

## L-4 Grasshopper

As the 1930s began, aviation manufacturers offered individuals a new class of inexpensive, austere and reliable aircraft. The Piper Cub was born in this period and became an aviation legend. The Cub was initially produced by the Taylor Aircraft Company, which was subsequently acquired by William T. Piper and became the Piper Aircraft Corporation.

The popular model J-3 Cub with its distinctive yellow canvas skin appeared in 1937. It was a strut-braced, high-wing monoplane with a fixed landing gear. Large wheels allowed the small plane to operate safely from dirt airstrips and open, grassy fields. The Cub carried two people seated one behind the other in a small, enclosed cabin. It had brakes and a steerable tail wheel, but no electrical system or radio. Power came from a 65 horsepower, air cooled, four-cylinder engine. Fun to fly and requiring little maintenance, the Cub was ideal as a trainer and recreational aircraft.

The Cub came of age during World War II, acting as a mainstay of Army light aviation. Dubbed the L-4 Grasshopper, thousands of new pilots received their first flight instruction and soloed in it. The Army purchased over 5,000 Grasshoppers, which saw action in every theater. The versatile L-4 was used extensively for liaison, observation, fire support coordination and forward air control duties.

Only a few years later, the L-4 was again on duty in Korea. Based on its long reputation for reliable service, many allied nations flew modern models of the L-4. Today legacy versions of the Piper Cub continue to fly as recreational and utility aircraft, making it one of the longest enduring aircraft in American aviation history.

November 1942, he took part in the invasion of North Africa while assigned to the 34th Infantry Division. Watson flew near continuous combat missions in North Africa, then participated in the Salerno landing in Italy and stayed with the 34th Division during vicious fighting on the Italian peninsula. One day while flying over the infamous Gustav Line, he spotted a German infantry battalion that had carelessly exposed itself to American artillery fire. From his L-4, Watson adjusted indirect fire that devastated the enemy, an action that earned the Guard aviator the Silver Star. On Thanksgiving Day 1943, Watson received orders assigning him as a flight instructor stateside. The Texan packed his belongings in his duffle bag for the journey home; inside was his log book that included 3,000 flight hours, 2,000 of them in combat.[15]

## Aviation in the Post - War Army

By the end of World War II, Army aviation had established itself as a valuable asset on the battlefield, and its permanent place in the post-war Army was all but assured. Still, leaders in the newly formed USAF scoffed at the idea that the Army should have its own aviation force. The Air Force argued that close air support missions and other types of combat missions remained within its purview, even though it acknowledged the role of organic, light aviation in ground units. To ensure that Army aviation would never develop to the point where it seriously threatened air-ground support roles, the Air Force fought to maintain control of aircraft procurement programs.

A pilot prepares to start his L-4 Grasshopper somewhere in Britain in 1944. *Army Aviation Museum Collection*

While the Army and the Air Force fought turf battles over the future of tactical aviation, the National Guard pressed ahead with reconstituting itself following the war. Citizen-soldiers had been on active duty long enough during the war that their terms of enlistment in the National Guard had long expired. Starting in 1946, the National Guard began to rebuild itself in earnest. With the creation of USAF, separate flying units in the states were reorganized as the Air National Guard (ANG) starting in September 1947.

On the Army side, the new Army National Guard (ARNG) began to emerge. Because of the effectiveness and outstanding service of light aviation during World War II, the Army decided that light aircraft were needed throughout the combat arms and at nearly every echelon of command. New ARNG combat divisions were organized that included light aviation assets. Post-war tables of organization authorized light aircraft in army, corps and division headquarters, every echelon of the field artillery from corps to individual battalions, armored and infantry regimental headquarters, cavalry groups and squadrons, and engineer and signal battalions. As part of the Army, the ARNG was allocated twenty-five infantry divisions, two armored divisions, twenty-one regimental combat teams (RCT) and hundreds of other separate companies and battalions. No organized light aviation units had existed in Guard ground units before World War II, so the activation and sustainment of these units presented a formidable challenge.[16]

Starting in 1947, the National Guard Bureau (NGB) and the states began planning for the startup of an ARNG aviation program. A single, experienced liaison pilot was assigned to NGB to initiate and coordinate nationwide planning. Based on authorization tables, the ARNG was allowed a fleet of over 800 light aircraft. Preliminary negotiations were initiated for the acquisition and delivery for a little more than half of the identified requirements. The Guard hoped to purchase forty-seven Navion L-17 and 376 Aironca L-16 aircraft. Because both primary and replacement pilots were authorized, NGB determined that as many as 1,200 liaison pilots were needed. In addition, an undetermined number of mechanics, ground crew members and civilian caretakers would have to be trained and organized. In all, Guard planners and aviators faced a formidable challenge in organizing a major flying force that had never before existed. By the end of 1947, the wide parameters of an ARNG aviation program had been established, but the actual work of creating combat ready flying units had not yet begun.[17]

Citizen-soldiers demonstrated a keen interested in military aviation since its earliest inception. Within the National Guard, and among the several states, aviators showed an innate talent in mastering the skills of flying and sought to exploit the advantages of both military and commercial aviation. From the start, the War Department carefully husbanded resources targeted for military aviation and all too often refused to pass them to the Guard. Still, citizen-aviators were successful in acquiring aircraft and in gaining trained pilots, mechanics and other ground personnel. Before World War II, the National Guard had established a long legacy of organized flying units. In the years just after the war, the Army Guard stood on the threshold of creating a major new flying program based on light, organic Army aviation. However, at the time, the exact form and extent of the ARNG aviation force that would eventually emerge remained anyone's guess.

# NOTES

[1] 1st Lt. Luther L. Walker, "A Coming of Age: Aviation in the Army National Guard," *National Guardsman,* July 1971, 2-11. All information on the development of National Guard aviation in its early years is from the cited source unless otherwise noted.

[2] www.dmna.state.ny, Feb 24, 2009.

[3] Charles J. Gross, *The Air National Guard: A Short History* (Washington, DC: NGB Historical Services Division, 1994), 6.

[4] "Pilot Qualification," *National Guardsman,* August 1957, 39.

[5] "ANG: Model 1916," *National Guardsman,* November 1957, 39.

[6] Gross, *Air National Guard,* 6.

[7] Ibid., 7-8.

[8] Ibid.

[9] Frank Perkins, "Army Aviation Pioneer," *National Guard,* July 1979, 18-19, 22, 39.

[10] Ibid.

[11] Edward L. Baker, *The Development of Army Light Aviation* (Washington, DC: U.S. Army Center of Military History, 1995), 37-41.

[12] Ibid.

[13] Ibid.

[14] Ibid.

[15] Perkins, "Army Aviation Pioneer," 18-19, 22, 39.

[16] NGB, *Annual Report,* 1947, 83-85.

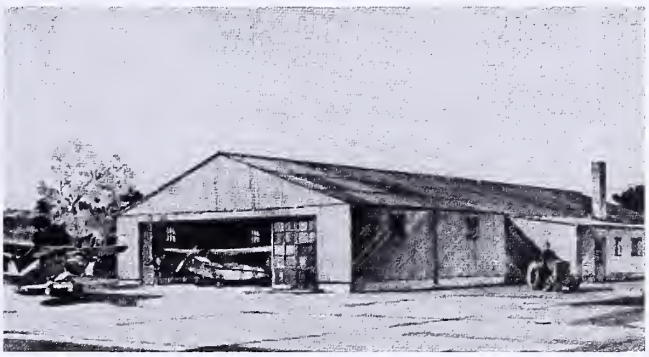
[17] Ibid.

# CHAPTER TWO

## THE RISE OF ARNG AVIATION, 1948-1969

During the first two decades of the Cold War, the creation and growth of a new ARNG aviation program took place within the context of events that affected Army aviation as a whole. At first, Army aviation struggled to free itself from the authority of the U.S. Air Force. Then the helicopter became more dominant based on experiences during the wars in Korea and Vietnam. Over time, Army aviation grew from a small fixed wing force to a major institution equipped with a wide variety of assets, including cargo and attack helicopters. One of the most important developments of the era was improvements in the management of personnel, training and equipment, including the establishment of Fort Rucker, Alabama, as the Home of Army Aviation.

The expansion of ARNG aviation mirrored many of these developments. In the beginning, the ARNG aviation program was small and flew only light fixed wing aircraft. Twenty years later, ARNG aviation was a much larger force equipped with a balanced fleet of fixed wing planes and helicopters. Training pilots and crews was a difficult but not insurmountable challenge, as was organizing and running a variety of widespread flight operations and maintenance facilities. One of the greatest developments of the early period was the wider use of aviation assets for state missions, ranging from providing civil authorities with selected assistance to saving lives during natural disasters. State aviators struggled throughout the period to overcome safety issues and shortages in aircraft and maintenance assets. However, they persevered, and by the close of the Vietnam War, ARNG aviation was postured to become an even more critical component of Army aviation and the nation's defenses.



The approved design for the ARNG's first flight facilities starting in the late 1940s. The hangar was designed to hold six fixed wing aircraft and had sides of corrugated, weather-proof material, a floor of compacted earth, and no air conditioning. Such spartan facilities remained in use for many years. *National Guard Educational Foundation*

### ARNG Aviation Takes Flight

NGB had taken the first steps in planning an ARNG aviation program in 1947, and the following year those plans produced results. The major challenge was to assemble and organize the resources to support the three basic building blocks that comprised the program: personnel, aircraft and facilities.

No military force exists without people, and the acquisition of rated pilots was a top priority. The array of light aviation flying units authorized in ARNG divisions, regiments, and separate battalions and companies resulted in a requirement of 857 pilots to fill authorized positions in tables of organization and equipment (TOE). NGB successfully argued that flying units needed

authorizations for pilots over and above TOE strength to ensure that each organization had enough qualified pilots on hand at any given time. Assigned pilots could be unavailable due to medical problems or while awaiting required initial flight and refresher training. Unlike the active Army, the Guard did not have the option to reassign pilots from unit to unit across state lines to fill vacancies and maintain readiness. The Army agreed to provide a 50 percent excess for authorized flight personnel to meet unique ARNG needs. As a result, the total requirement for rated liaison pilots jumped from 857 to 1,322. Such pilots were to hold company grade rank while assigned to an authorized, vacant position.[1]

Military aviators from World War II helped to provide an initial pool of trained and ready pilots. The first group of Guard aviators came from those who had flown as liaison pilots during the war. The ARNG established a simple administrative procedure for revalidating their old ratings and placing them on flight status. Because of their experience in flying the L-4 in combat, this group of pilots became known as the "Cub Club." NGB estimated that as much as 20 percent of the aviators initially assigned to the ARNG aviation program were Cub Club veterans. A similar system for acquiring veterans with maintenance and administrative expertise in aviation was also implemented, providing a small but ready pool of maintainers and administrators.[2]

A second group of trained aviators came from those veterans joining the Guard who had held pilot ratings during World War II in other services and in any number of combat aircraft. The Air Force and the Army agreed that former AAF pilots and naval aviators could be rated as Guard liaison pilots after having their records reviewed by a rating board and undergoing additional training. The training consisted of the completion of a light aviation officers' course conducted by the Field Artillery School at Fort Sill. As an alternative, veteran pilots could complete a similar course offered locally by qualified liaison aircraft instructors.[3]

Early Army Guard aviators often operated under austere conditions. An L-19 Bird Dog being refueled in the field in the early 1950s. *Army Aviation Museum*

The final group to enter the aviation program was new volunteers without previous flight experience or training. The Army agreed to provide new ARNG pilots with flight school quotas at the Air Force Liaison Pilot course at Gary Air Force Base in San Marcos, Texas, where many World War II liaison pilots had been trained. All three of these initiatives provided slow but steady progress in acquiring trained pilots. By the end of 1948, the ARNG had filled 462 of its 1,322 authorized pilot positions, with 347 of these fully trained and on flight status.[4]

Light observation aircraft were made of wood and fabric, allowing them to be collapsed and transported by truck to save wear and tear on engines and air frames. *Army Aviation Museum*

In the first years of its aviation program, the ARNG proved more successful at acquiring suitable aircraft than trained pilots. In 1948 , the Guard procured and distributed 376 L-16 two-seater aircraft and 47 L-17 four-seaters.

Every federally recognized unit with a light aviation section received at least one airplane. The ARNG received another bonanza of aircraft in 1949 when the ANG surrendered all of its assigned L-5 aircraft to ARNG flying units. Two years later, the ARNG purchased an additional 268 L-10 two-seater aircraft at a cost of $3.8 million, fielding them to the states at the rate of twenty per month starting in March 1951.[5]

Providing adequate facilities for storage and maintenance of aircraft proved challenging. NGB recommended the construction of standardized facilities for flight operations and maintenance based on a common design pattern. But finding monies to build such facilities was difficult when armory construction for a heavier, mechanized ARNG ground force was the top priority. By December 1949, the Chief, NGB (CNGB) reported that the Guard had completed construction on only twelve liaison plane hangars nationwide.[6]

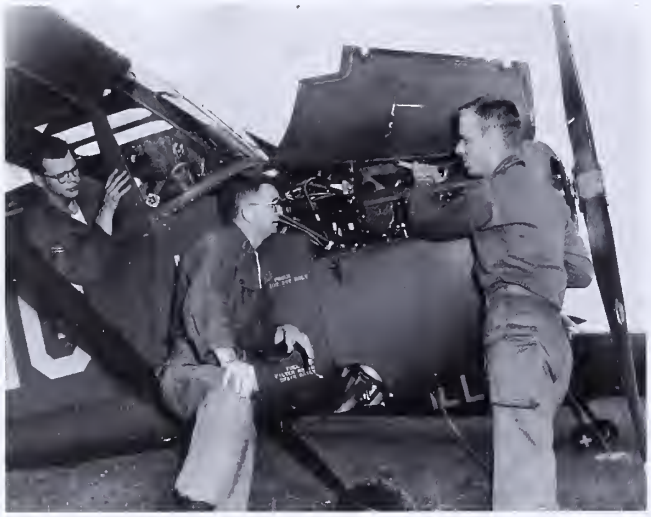
Early flight operations buildings were crude by modern standards, usually constructed during World War II or very basic leased facilities on commercial airfields. Many of them remained in use for decades until replaced by more modern, suitable facilities. *Utah National Guard*

As a rule, the states sought to support their new flying units by leasing existing facilities on commercial airports. In other instances, the Guard took over former AAF airstrips built across the country during World War II as temporary pilot training sites. The need for building and manning adequate maintenance facilities was real, as major engine repairs for fixed wing aircraft proved problematic. In many instances, the states used contracted civilian mechanics for repairs and scheduled services in order to avoid grounding aircraft for extended periods. Whenever possible, the states teamed up to solve their common problems. For example, New York established an aircraft maintenance facility in eastern upstate,

ARNG aviation was a purely fixed wing force in the beginning. A three-ship flight of the Utah Guard passes over Salt Lake City on a mission. In the background towers the majestic Wasatch Mountains. *Utah National Guard*

sharing its use with neighboring Connecticut as the best means of supporting their combined fleet of L-16 light aircraft.[7]

The Light Aviation Section of Illinois' 33rd Infantry Division claimed the distinction as the first ARNG aviation unit organized. With thirteen fixed wing aircraft, the section was fully manned, trained and equipped by late 1948. During an activation ceremony held on December 7, in recognition of the seventh anniversary of the Pearl Harbor attack, Maj. Gen. Richard Smykal, the 33rd Division commander, christened one of the unit's aircraft with a container of water drawn from Tokyo Bay as a symbol of America's victory in the recent war. The unit's main flight facility was at Rubinkam Airport in Cook County. The pilots were an experienced group because of their war service; each had almost 1,000 hours of flight time with no less than 130 hours flown in combat. A strong training program was already in action, with pilots flying in excess of sixty hours each month.[8]



Mechanics of the Light Aviation Section, 33rd Infantry Division, Illinois ARNG, conduct a pre-flight check of the engine of one of the unit's L-19 Bird Dogs in 1955. *National Guard Educational Foundation*

Throughout 1948-1950, Guard fixed wing flying units sprang up across the country. While each state had its own unique experience in organizing aviation assets, the creation of Kentucky's ARNG aviation force was perhaps typical. To help the effort get off the ground, the Army assigned Capt. George H. Howell, Jr., to the Bluegrass State to serve as a light aviation advisor. The first Guard officer known to have joined was 1st Lt. Louis R. Rayburn who served as a liaison pilot in the 623rd Field Artillery starting in July 1947. A World War II veteran, Rayburn was a Cub Club pilot who had flown extensively in Europe. Another officer was 1st Lt. Joseph L. Van Fleet, Jr., also a World War II veteran, who had earned the Distinguished Flying Cross and the Air Medal with three Oak Leaf clusters while flying with the Eighth Air Force. A number of other World War II veterans and new volunteers joined the Kentucky aviation force as pilots, mechanics, and armory caretakers.[9]

Under Captain Howell's supervision, the Kentucky Guard received aircraft and established a number of flight facilities. By early 1949, Kentucky had eight fixed wing aircraft available at three different locations. The main flight facility was located at Bowman Field in Louisville, where the Guard received a twenty-five-year lease for almost fifty acres of land and nearly forty buildings. In addition to a flight facility, the complex housed the armories of several major ARNG commands. Additional flight facilities were established at Blue Grass Field in Lexington and at Norris Field in Glascow. To facilitate the qualification and training of pilots

A formal group shot of full time state aviation technicians in front of their maintenance shop in Kentucky. Behind them sit an L-20 Beaver and an L-19 Bird Dog. *CW4 Harold Canon*

and mechanics, Kentucky established "Ground Light Aviation Schools" at all three locations.[10]

On February 7, 1949, the Kentucky Guard staged a unique event to promote recruiting. On that day, a strange-looking aircraft with a bubble-shaped, clear canopy cockpit and an odd looking tail boom buzzed Bowman Field in Louisville, putting on a flight demonstration for the media, the public and potential Guard recruits. The aircraft was a new light observation helicopter from Godman Field at nearby Fort Knox. The most remarkable event was a demonstration of the helicopter's ability to hover stationary in the air and to land vertically. Afterwards, the Army pilot gave a number of Guard aviators rides over Bowman Field and made the rotary wing aircraft available for public viewing as a static display. The exhibition not only fired the imagination of potential recruits but spawned a desire among Bluegrass State aviators to get their own helicopters. What they did not know at the time was how much the helicopter would come to dominate military aviation worldwide, including the ARNG aviation force.[11]

## The Korean War

In peacetime, military change and innovation is often modest, slow and uncertain. By contrast, changes during war can be bold and dramatic, with profound implications for military forces that last well beyond the end of hostilities. The Korean War helped to rearm the U.S. military for the long term prosecution of the Cold War, bringing change that forever altered the face of Army aviation.

Following World War II, the USAF had sought to impose a number of restraints on the growth and development of Army aviation. Using arguments similar to those put forth in 1941, the Air Force sought to limit a separate flying force within the Army. Opposing views on the importance and expansion of Army aviation resulted in severe interservice disagreements inside the Pentagon.

In 1949, the Army and the Air Force published a joint regulation which settled the turf battle for the moment. The Air Force largely won the argument by successfully imposing mission and weight requirements on Army aircraft and retaining controls over procurement. Army aviation missions were restricted to those seen in World War II: aerial observation, liaison, communications and limited supply. Weights for Army aircraft were limited to 2,500 pounds for fixed wing and 3,500-4,000 pounds for rotary wing aircraft in the Army's fledgling fleet of helicopters. Logistics was to be a shared responsibility. The Army retained responsibility for determining aircraft requirements and budgeting for aircraft and parts; the Air Force would procure, store and issue new aircraf t from its depot-level maintenance facilities. In addition, the Air Force planned to provide depot-level maintenance stateside and all field maintenance support to Army aviation units deployed overseas through 1950. As a result of this stipulation, the Army entered the aircraft maintenance business on stateside posts starting in 1950.[12]

The introduction of the helicopter onto the battlefield in the Korean War upset all the deliberate plans of Pentagon paper pushers. The helicopter had seen limited service near the end of World War II, primarily for air rescue. Expanding on tactics the French had used during an insurgency in Algeria, Army aviators began to experiment with arming helicopters with heavy weapons for fire support of ground forces. Other important tactical uses included limited troop transport, resupply, observation, and command and control. Impressed by the helicopter's service and its potential for even broader use, the Army organized and sent to Korea the 6th and 13th Helicopter Transportation Companies, the first helicopter lift units to serve in a combat zone.[13]

The most widespread and influential role of the helicopter in Korea became medical evacuation (MEDEVAC). In the meat-grinder battles in Korea, the evacuation of wounded soldiers by ground ambulance was a critical

# L-19 Bird Dog

The L-19 first entered National Guard service in 1950, replacing aircraft the Army Guard was compelled to surrender at the beginning of the Korean War. Primarily an observation airplane, it was assigned to infantry, artillery, armor and engineer battalions. Aside from its observation mission, the L-19 was often employed in other tasks such as reconnaissance, medical evacuation, resupply and as a courier. The Bird Dog proved its worth in Korea and continued to serve throughout the Vietnam War.

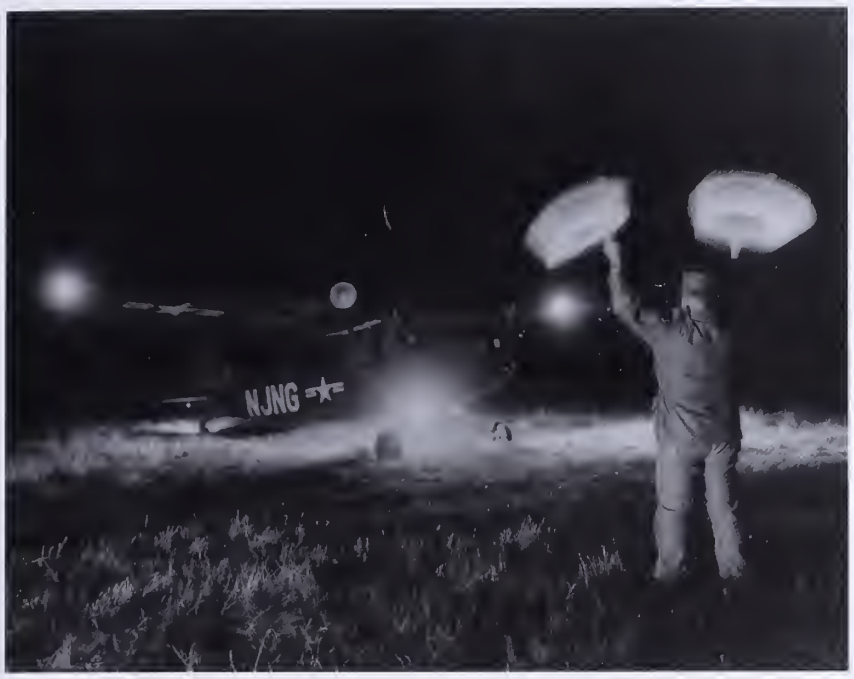
A true pilot's aircraft, the Bird Dog was reliable and easy to fly. Powered by a Continental E-190 engine, it produced 213 horsepower on takeoff with a cruising speed of 90 knots and an observation speed of just 42 knots. The L-19 had a ceiling of 20,000 feet and a range of 515 miles. With a crew of two, it could carry two additional passengers. With the rear seats removed, there was just enough space for two men to lie down for medical evacuation. Unlike earlier light aircraft frames which were fabric, the L-19s were all-metal and weighed 1,448 pounds. With a wingspan of 36 feet and a length of 25 feet, it could carry about 400 pounds of cargo in lieu of passengers.

The versatile L-19 also became a favorite for state missions, including support to law enforcement and search and rescue. In 1962 the L-19 was redesignated as the O-1 but retained the Bird Dog nickname. The L-19/O-1 remained in Guard service into the mid-1970s. A classic light aircraft, many Guardsmen had their very first exposure to military aviation while flying in the seat of an L-19. Its lasting influence on the first generation of ARNG aviators cannot be overstated.

mission made extremely difficult by high, rugged mountains and plunging valleys. The helicopter was quickly adapted for this use. An enduring image of the Korean conflict was the small H-13 Sioux helicopter, with its signature bubble canopy and stretchers lashed on either side of the fuselage, evacuating casualties to mobile surgical hospitals. MEDEVAC missions were credited with saving the lives of 22,000 soldiers. The Air Force could not provide an adequate, alternative capability to perform this pervasive and important tactical mission. As a result, the roles of helicopters in Korea helped to guarantee the future of Army aviation programs and the military use of the helicopter itself.[14]

The H-13 Sioux proved itself as a reliable combat aircraft during the Korean War, setting the stage for the wider military use of the helicopter in the following decades.
*Army Aviation Museum*

At the same time, Army fixed wing aircraft added to their illustrious career that had begun in World War II. Their pilots supported combat operations with observation, transportation, resupply and MEDEVAC missions. The L-4 still saw service, but the Korean War introduced a family of larger, more capable fixed wing aircraft. The Cessna L-19 Bird Dog became a favorite of pilots, while the new and larger L -20 Beaver could carry six personnel and up to a ton of cargo. A number of reserve component aviators were recalled to active duty immediately to fly fixed wing aircraft. Guard aviators were among them, even though no records exist of their exact numbers.[15]




The Korean War proved that light aviation had to operate under any type of conditions, day or night. A pilot from New Jersey's 50th Armored Division lands an L-19 Bird Dog at night on an unimproved runway at Fort Drum, New York. A ground crewman with illuminated paddles directs the aircraft into final position. *National Guard Educational Foundation*

As a whole, about one-third of the ARNG was mobilized for Korea. The first Guard flyers to serve in combat were assigned to the light aircraft observation sections of field artillery battalions rushed to Korea to reinforce weary allied ground forces. North Korean and Chinese troops soon learned a valuable tactical lesson that America's enemies had discovered in World War II; whenever an L-4 appeared overhead, large volumes of accurate and deadly American artillery fire soon fell on their positions. Grasshoppers circling overhead often became the favored targets of enemy ground fire.

The Chinese frequently made forward airstrips the focus of night infiltration raids, engulfing Guard aviators in ground combat. In late spring 1951, a Chinese night attack nearly overran the air observation section of the New York ARNG's 955th Field Artillery. To those defending the position, it was clear the Chinese were trying to destroy their Cubs. Everyone grabbed their personal weapons to repulse the attack. 1st Lt. August Jamnicki ran to his plane, started it, and tried to take off, but heavy fire prevented him from getting aloft. Meanwhile, a half-track armed with quad .50-caliber machine guns counterattacked, forcing the Chinese to withdraw. Daylight revealed three planes damaged, vehicles riddled with bullet holes, and one troop tent destroyed, but the observation section was soon back in full operation.[16]

The light aviation sections embedded within eight mobilized ARNG combat divisions also saw service during the war. Four divisions deployed to Western Europe to bolster North Atlantic Treaty Organization (NATO) forces expecting a major onslaught from the Soviet Union. Two divisions remained in the continental United States (CONUS) as a strategic reserve. The remaining divisions, Oklahoma's 45th and California's 40th, deployed to Korea and saw action.

A large, immediate influence the conflict had on ARNG aviation was the siphoning of assets. Light aviation units in Korea were strapped for assigned and replacement fixed wing aircraft. Consequently, in 1951 the Army directed the Army Guard to hand over ninety-five planes for active duty service, nearly 20 percent of the entire ARNG aircraft fleet. It would not be the last time that the Army would recall aircraft from the Guard in wartime.[17]

To ease the blow of the loss, the Army promised that new aircraft purchases would replace the surrendered planes within a year or so. True to its word, the Army began issuing the new L-19 Bird Dog to the Guard, and by the end of 1952, ARNG aviation included 275 such aircraft, a number that would double in the coming years. The L-19 quickly became a favored aircraft and the backbone of the Guard's fixed wing fleet.[18]

# Fort Rucker, Alabama
# U.S. Army Aviation Center of Excellence
# (USAACE)

The U.S. Army Aviation Center and Cairns Army Air Field at Fort Rucker, Alabama, as it appeared in the late 1960s. Parked on the tarmac at left is an L-20 Beaver of the Alabama ARNG. *Army Aviation Museum*

Camp Rucker first opened as an Army training site on May 1, 1942, during the mobilization for World War II. The post was named in honor of Col. Edmund W. Rucker, a renowned Confederate cavalryman who became an industrial leader in Alabama after the American Civil War. In September 1942, additional acreage was acquired for the construction of Ozark Army Air Field. In January 1959, the name was changed to Cairns Army Air Field; today it remains one of the U.S. Army's busiest air fields.

Camp Rucker was inactive from March 1946 until August 1950, when it reopened after the outbreak of the Korean War. Following the Korean armistice, Camp Rucker was closed. However it reopened quickly in August 1954 as a result of the Army's decision to move its aviation school from Fort Sill to Camp Rucker. The first Army aviation training took place at Camp Rucker in October 1954. On February 1, 1955, the Army Aviation Center was officially established. In October 1955 the post was given permanent status as a federal installation, and its name changed from Camp Rucker to Fort Rucker. It also became the site of the U.S. Army Aviation Museum.

Throughout the late 1950s the Army took charge of its own aviation training programs, consolidating most of them at Fort Rucker. On May 15, 1975, the Army Aviation Center and Army Aviation School were reorganized into a single entity, the U.S. Army Aviation Center. The decision resulted in Fort Rucker truly becoming the "Home of Army Aviation."

In 1983 the Army approved the creation of a separate aviation branch, and Fort Rucker soon underwent a renaissance. Later that same year, the post began an extensive building and refurbishment program that provided new facilities for flight training and instruction. By mid-1985, Fort Rucker had a number of new classroom buildings, living quarters and dining facilities. Aviation Officer Basic and Advanced Courses began at Fort Rucker in 1984, and a gradual consolidation of aviation-related activities followed. In 1986 the U.S. Army Air Traffic Control Activity became part of the aviation center. In the following year, a Noncommissioned Officers

Academy was established. In 1988 the Army Aviation Logistics School, which had been dependent on the Transportation Center at Fort Eustis, Virginia, was incorporated into the aviation center. Since the end of the Cold War and through the first years of the war on terrorism, USAACE excelled in instructing Army aviation, thereby living up to its motto: "Above the Best!"

Because they are an integral part of Army aviation, Guard members have long been a part of the Fort Rucker experience. For decades, ARNG officers, warrant officers and enlisted personnel have attended flight training and other courses of instruction there. Expert teams from USAACE routinely advise Guard aviation units and facilities on standardization and safety issues. The ARNG maintains a senior aviation advisor to the commanding general at USAACE in the rank of colonel. In addition, the ARNG Aviation and Safety Division (NGB-AVS) maintains a Multi-Media Branch there whose mission is to manage a full range of media capabilities from television production to print that provides support for ARNG aviation and safety programs.

## The ARNG Helicopter Force Emerges

The successful performance of Army fixed wing and rotary wing aircraft in Korea provided the impetus for a radical course change in the development of organic Army aviation. In January 1955 an Aviation Division was created in the Army's Operations (G-3) offices in the Pentagon. At the same time, the Army's Personnel (G-1) staff centralized the management of all aviator assignments from the various combat and combat support branches. A new aviation center was established at Fort Rucker, Alabama. The Army also assumed wider responsibility for the procurement of aircraft, supply functions and depot-level maintenance. The best evidence of the vitality of Army aviation was the decision to place twelve helicopter battalions on active duty by the end of 1956.[19]

Guard aviators were quick to loan personnel and equipment across state lines during emergencies. New York loaned this H-13 Sioux helicopter and its pilot to Connecticut to help look for survivors following a flood near Hartford in 1955. The covers mounted over the stretchers protect patients from prop wash and bad weather during medical transport. *National Guard Educational Foundation*

In November 1956 the Defense Department announced new policies that for all intents and purposes separated Army aviation from Air Force influences. Specific aviation functions were spelled out in detail based on experience in Korea and anticipated, future battlefield requirements. Rotary wing aircraft of up to 20,000 pounds in weight were authorized, allowing the development of larger, twin-rotor cargo helicopters. Fixed wing aircraft were limited to 5,000 pounds, but the Army was allowed to acquire larger aircraft if a valid need was demonstrated. Over USAF objections, the Army used this stipulation to develop a larger fleet of multi-engine, fixed wing aircraft, including the OV-1 Mohawk and the CV-2 Caribou.[20]

ARNG aircraft often operated from undeveloped strips with no established air traffic control facilities. In 1957 members of Texas' 49th Armored Division Aviation Section fabricated their own mobile control tower mounted on the bed of an old truck. *National Guardsman*

During the same period, the Defense Department ordered the Air Force to turn over all responsibility for ground forces pilot training to the Army. In 1956, the Army took over Wolters Air Force Base in Mineral Springs, Texas, making the new Camp Wolters the Army's primary helicopter training base. Three years later, primary responsibility for fixed wing pilot instruction moved from Gary Air Force Base in Texas to Fort Rucker. The Aviation Warrant Officer Program had started at Fort Sill during the Korean War. This school also moved to Fort Rucker, graduating its first class of fixed wing

## H-13 Sioux

The H-13 Sioux helicopter was the Army's first large-scale rotary wing aircraft and saw extensive service during the Korean War. In fact, it entered cultural history as the helicopter seen in the opening sequence of the hit television show *MASH*.

Alabama's ARNG was the first to receive the H-13 in 1953. By the end of the 1950s, the helicopters were available in every state and flew a variety of missions. Primarily designed as an observation platform, H-13s were often assigned to divisional or other artillery headquarters to call in targeting information during gunnery training. But their reliability and versatility prompted their use in many state missions, making them a true workhorse of ARNG aviation. H-13s were always busy during natural disasters in performing search and rescue missions and hauling special cargo such as medicine, emergency supplies and mail. When not in use for training or emergencies, H-13s were a popular aircraft for transporting senior personnel.

The H-13 had a Lycoming six-cylinder, horizontally opposed, air cooled engine capable of a cruising speed of about 100 mph and a range of 166 miles. Its operational ceiling was 13,400 feet, but its cargo capacity was limited to about 600 pounds.

The Sioux had one pilot and room in the cockpit for one or two more passengers. On each outrider over the landing skids could be mounted platforms to carry litters; the H-13 became the first air ambulance so common today. The Sioux remained in Guard service well into the late 1970s, when finally replaced by the UH-1 Huey.

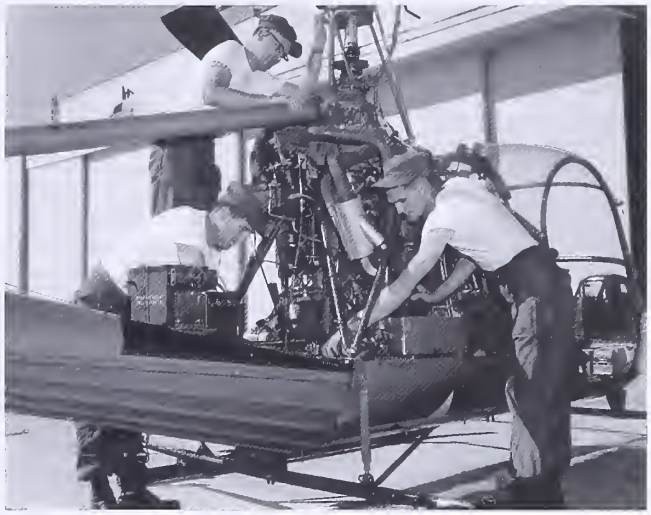
warrant officer pilots in April 1955. The following year the first class of warrants entered rotary wing instruction at Camp Wolters.[21]

Amidst all of these changes came yet another vital development. The Army Aviation Association of America (AAAA) was formed in early 1957 by a small group of senior aviation officers, with the first two chapters organized at Fort Rucker. Its mission was to act as a voice for the aviation soldier and the aviation community at-large while also serving as a forum for the exchange of ideas on aviation issues.

The transformation of Army aviation directly affected ARNG flying programs. The Guard received its first helicopter in April 1953. It was issued to Alabama, probably because of the state's ready access to training, maintenance and storage facilities at Camp Rucker. The first Guard TOE unit assigned a helicopter was Minnesota's 47th Infantry Division (later redesignated as the 34th Infantry Division). The division was ordered to active duty during the Korean War and remained stateside at Camp Rucker to conduct training. The first helicopters joined the 47th while it was still there in 1953. Other helicopters were available for issue to the Guard, but the lack of trained pilots and maintenance personnel in the states at first inhibited equipment fielding.[22]

Two Guard pilots take off on a mission in an H-23 Raven. The use of flight helmets did not come into widespread use until the late 1960s. *Army Aviation Museum*

The first major distribution began in 1954, with the Guard receiving forty reconnaissance-type helicopters in selected units across the nation. The new helicopters were limited to two models: the H-13 Sioux and the H-23 Raven. The next year, the number of copters doubled. By 1960, the complete inventory of ARNG aircraft included 184 helicopters and 659 fixed wing airplanes. Within only a few years, a number of the H-23s were already nearing the end of their life cycle, and the Guard asked the Army for newer, more capable aircraft. The Army's response was one that would soon become familiar to Guard aviators: newer aircraft were unavailable because of higher fielding priorities to active Army units. State aviators began to feel they were getting only leftovers from the Army to support their flight programs.[23]



Mechanics from Kansas' 137th Light Helicopter Company inspect one of their H-23 Ravens prior to a mission in 1959. *National Guard Educational Foundation*

The slow receipt of helicopters did not prevent the Guard from growing new aviation force structure. At the time, ARNG independent aviation organizations were limited to company-sized units. The Guard implemented TOEs by activating units even though critical equipment items were unavailable, including helicopters. After initial activation, units had a number of years to complete all required training and to receive major equipment items. In addition, the thinking at the time was that if the companies were ordered to active duty during a

national emergency, they would receive all required equipment upon mobilization. With the Army's approval, the ARNG activated a number of company-sized air ambulance and maintenance units. In 1955, the Guard had 84 helicopters on hand, but they represented only 31 percent of the total existing TOE requirement for helicopters. By the end of the 1950s, the ARNG still had organized helicopter units that were short primary aircraft; a few companies had no aircraft at all.[24]

As a rule, pilots only had direct, two-way communications with those on the ground equipped with radios. To solve the problem, the Guard wired bull horns into helicopters, such as this H-13 Sioux, so aviators could communicate with others on the ground. *Army Aviation Museum*

The debut of the helicopter fleet and increases in the number and types of fixed wing aircraft resulted in a large growth in the pilot population. At the end of the Korean War, ARNG aviation manpower stood at nearly 600 pilots and almost 300 maintenance personnel. The number of pilots increased an average of a dozen per month through the remainder of the decade. In 1957, the force reached a major milestone by having more than 1,000 pilots on flight status. In addition, eighty-five aircraft mechanics had achieved flight status. By the end of 1959, the pilot population stood at 1,260, nearly double from where it had been only six years earlier. The entire ARNG numbered about 400,000 citizen-soldiers at the time. Its aviation force represented less than one-half of 1 percent of the entire Army Guard.[25]

Despite its tiny size, the ARNG aviation program added many significant capabilities to the Guard as a whole. One of those was the use of military aircraft for state missions. Civil authorities and Guard commanders both realized that aviation brought unique versatility to domestic emergencies. Only aviation had the ability to get to the scene of a crisis quickly, make timely observations, and render accurate reports by radio to governors, the adjutants general (TAG), policemen and other officials. The mobility of air power enabled senior civilian and military leaders to quickly reconnoiter broad areas affected by natural disasters and conduct far-flung search and rescue operations. With its ability to hover and to take off and land vertically in difficult terrain, the helicopter became an indispensable part of rescue missions. In the direst of circumstances, aircraft could evacuate injured personnel and deliver critical equipment and supplies. For the first time, the American people witnessed Guard helicopters using cables and ropes to pluck workers from the tops of buildings threatened by floods and fires and families from home rooftops stranded by all types of natural disasters.

Civil aid and military support missions were flown nationwide. Hurricane Diane caused severe flooding in the Northeast and Mid-Atlantic states in August 1955 that resulted in the widespread use of aviation assets. In Connecticut, helicopters of the 43rd Infantry Division flown by ARNG Korean

Guard helicopters proved invaluable during search and rescue missions. An H-13 Sioux of the Aviation Section, 35th Infantry Division, Kansas ARNG, looks for a lost child in a heavily wooded area in 1956. *Army Aviation Museum*

Helicopters were used frequently for executive air transport in the states. A Kentucky H-13 Sioux sits on the lawn of the state capitol in Frankfort, circa 1960. *Kentucky National Guard Museum*

War veteran pilots lowered ropes to rescue scores from rooftops. During the same disaster, Pennsylvania ARNG helicopters rescued hundreds of stranded personnel while L-19s air dropped vitally needed medical and food supplies in isolated locations. In the West, Guard aircraft provided firefighters with information on rapidly spreading wildfires and air-dropped hay to animals stranded by deep snows. Aviators also helped the police to capture escaped prisoners, apprehend dangerous criminals on the run, and locate lost hunters and fishermen. In one of the most unique missions of the decade, Guard planes and helicopters delivered the Salk vaccine to remote communities during the outbreak of a nationwide polio epidemic in 1955.[26]

An H-23 Raven of the Aviation Section, 34th Infantry Division, Iowa ARNG, was instrumental in saving two men from drowning in the Cedar Rapids River after their boat capsized while going over a waterfall in 1959. The copter hovered just inches over the raging waters, allowing each man in turn to take hold of a cable anchored between the aircraft's landing skids. The pilot then slowly moved over the churning waters to deposit each person safely on the riverbank. *National Guard Educational Foundation*

As part of an air-ground exercise held in 1955, Michigan Guard medics transfer a "wounded" soldier from their ambulance to a waiting H-23 Raven from the Aviation Section, 46th Infantry Division, for medical evacuation. *National Guard Educational Foundation*

Accidents and safety violations plagued ARNG aviation in the 1950s and early 1960s. Capt. Yancey York goes over his pre-flight check list with crew chief Spec. 5 William H. Canon before lifting off on a mission in the 1960s. The wear of soft uniform caps in the cockpit was a common practice until the late 1960s. *CW4 Harold Canon*

Keeping pilots current and mechanics trained took considerable time and effort. With the expansion of Fort Rucker came an increased availability of training slots. More and more Guardsmen headed to southern Alabama for formal training. In 1959, nearly 300 student pilots attended the fixed wing aviator, rotary wing qualification, and instrument flying courses at Fort Rucker and in Texas. In addition, over one hundred enlisted personnel attended a variety of aircraft maintenance courses.

To maintain flight status, pilots had to fly one hundred hours per year. By the end of the 1950s, the annual ARNG flight program had increased to over 140,000 hours. On average, pilots flew 30-40 percent of their required hours during the two-week summer encampment that all Guardsmen knew as "annual training" (AT). Achieving the balance of required flight hours posed several problems. At the time, the Guard still drilled on one night during the workweek; monthly, weekend drill periods did not become the norm until the mid-1960s. Aviators often took to the skies in late afternoon or during early evening twilight throughout the workweek to squeeze in an hour or so of flight time. Others flew on their own on Saturdays or Sundays to accumulate hours. Access to aircraft was not tightly controlled, and many unsupervised Guard pilots took off from airstrips for local and cross-country jaunts without filing flight plans.[27]

The result was a spike in the aircraft accident rate. In 1956, NGB informed the states that the number of aviation accidents had become "a matter of vital concern." During the summer AT period that year, nine major mishaps had occurred in the short space of twenty-five days. A growing concern was that unsupervised aviation personnel constituted little more than informal flying clubs. Command investigations determined that the most common causes of accidents were poor judgment, faulty technique and flagrant disregard for basic flying rules and regulations. Commanders were encouraged to evaluate individual aviators and to conduct appropriate remedial training. Active duty personnel were also involved in too many accidents, and military flight mishaps became a public safety concern. As the 1960s began, the ARNG realized that it had to do something to repair its unsatisfactory safety record.[28]

## The Berlin Crisis

The divided city of Berlin was often a flashpoint for crises during the Cold War, and perhaps never more so than in the early 1960s. In the summer of 1961, Soviet Premier Nikita Khrushchev announced the end of the European powers' established rights to occupy portions of Berlin and threatened the city's complete isolation. As a shocked world looked on, the Soviets constructed a solid wall of steel, concrete, and barbed wire that divided east and west Berlin. In an instant, Berlin became the focal point where U.S. commitments to NATO and Soviet ambitions met in open confrontation.

On July 25, 1961, President John F. Kennedy addressed the nation, outlining the nature of the Berlin crisis, putting the U.S. military on high alert and asking for authority to mobilize the National Guard and Reserve. A rapid buildup of conventional forces was intended to demonstrate American resolve and to cool Soviet ambitions. In lieu of a declaration of national emergency, on July 31 Congress passed a joint resolution authorizing the call-up of 250,000 Guardsmen and Reservists for twelve months. ARNG units were alerted for mobilization, and starting in the first two weeks of October 1961, 44,371 ARNG soldiers entered active duty. Two ARNG combat divisions and an armored cavalry regiment (ACR) contained the lion's share of troops, and 264 other non-divisional units were mobilized.[29]

## H-19 Chickasaw

The Sikorsky H-19 Chickasaw helicopter first entered Army service in 1952, but was not issued to the ARNG until 1966. The D model, a general cargo carrier, was the most prevalent series flown by the Guard. The H-19 could carry ten combat loaded soldiers, a capability that led to aviation's increased involvement in combined arms training. The Chickasaw could also be modified to hold six litter patients.

When not carrying personnel, the D model could hold a little more than 1,000 pounds of cargo. The Chickasaw had two pilots with no crew chief or crew members. It was powered by a Curtiss-Wright, nine-cylinder radial engine, capable of a cruising speed of about 100 mph. It had an operational range of about 200 miles and a maximum ceiling of 12,000 feet.

One vignette from the period illustrates how state aviators joined efforts to accomplish the mission. In January 1966, ten H-19s became available for ARNG helicopter units in California and Washington. However, the aircraft were at Fort Rucker with no means for transferring them to the West Coast. The two states banded together and came up with their own solution. A team of forty-four California and Washington Guardsmen flew to Rucker aboard an Air Guard transport to retrieve the helicopters.

The return flight path followed a southerly course to avoid winter storms in the northern tier of states, but winter winds and rains still caused delays. Flying at seventy knots, the ten helicopters flew two-hour legs between fuel stops, following major highways that afforded easy emergency landing sites and made navigation simpler. A one-day maintenance stop in El Paso afforded crew rest and thorough maintenance checks before pressing on for home. Over a seven-day period, the aviators completed a 2,500-mile trip back to the West Coast, the Guard's longest mass helicopter ferry trip on record at the time.

The Chickasaws were phased out of Guard service in the mid-1970s as more UH-1 Hueys took their place.

The Berlin Crisis was the very first time independent ARNG aviation units were ordered to active duty. The roster of twelve mobilized units reflected the force structure additions that had occurred since the Korean War, with air ambulance and maintenance companies representing much of the force. A total of 225 pilots were ordered to active duty, nearly 15 percent of the 1,522 on flying status. As in the Korean conflict, the active Army took aircraft from the Guard. In addition to those that entered active duty with mobilized units, the ARNG surrendered another 84 airframes: 55 L-19 Bird Dogs and 29 H-13 Siouxs. The transferred aircraft allowed active duty units to meet additional training requirements imposed during the crisis.[30]

During the mobilization, Guardsmen trained, attended schooling, and provided support at active duty installations. The active duty stint of Nebraska's 24th Air Ambulance Company was perhaps typical of most flying units. Upon mobilization the company had sixteen pilots with an average of two thousand flying hours each. Five had flown in World War II and four others in Korea, with others still needing initial flight training in helicopters. The 24th had a number of H-19D aircraft and managed to get the remainder issued to them while on active duty at Fort Leonard Wood, Missouri. The reassignment of an additional fifty enlisted men brought the company up to its full strength of 144 enlisted soldiers prior to deployment. Mechanics attended additional schooling and worked on other aircraft at Fort Leonard Wood, all while maintaining their own aircraft at an operational readiness (OR) rate of 89.9 percent, well above the Army-wide average of 67 percent for H-19s.[31]

The performance of maintenance units and aircraft mechanics garnered widespread praise from active duty commanders. The 1104th Transportation Company, an aviation maintenance and supply unit from Texas, found itself on active duty at the Army's Atlanta General Depot in Georgia. Mechanics undertook repairs and maintenance on helicopters and fixed wing aircraft in garrison and spent some time on field exercises conducting maintenance in a tactical setting. Still, the 1104th lacked a number of special tools and test equipment that aircraft maintenance required, a problem that persisted Guard-wide. At the end of their tour, Col. Orval J. Baldwin, the Atlanta General Depot commander, rated the 1104th as "a closely-knit, cohesive unit with high morale and performance rate."[32]

American resolve finally convinced the Soviets to back down in Berlin, and ARNG units returned home during the summer of 1962. Compared to some of the often chaotic episodes during previous mobilizations, NGB declared the call-up for the Berlin Crisis "the most successful ever conducted." Though no ARNG unit deployed overseas, the mobilization achieved its desired results. For the first time in American history, a reserve component mobilization was used as a political instrument to deter war. In the event deterrence had failed, Guard units were immediately available for combat. As a whole, the aviation force performed well, but the first ever call-up of stand-alone aviation units highlighted several shortcomings in personnel, equipment and training.[33]

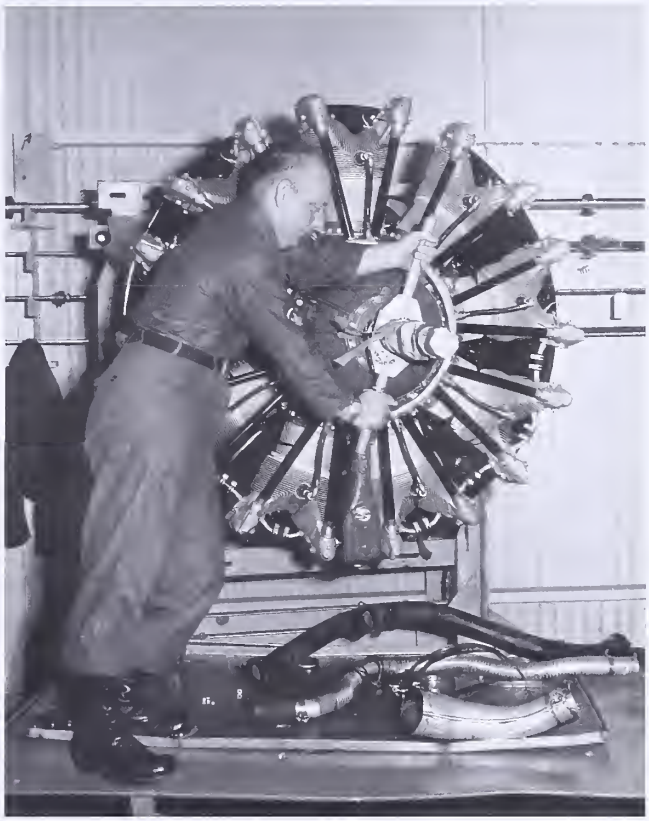
The growth of the aviation force and its increased role in domestic missions generated command interest in aviation among the states. For the first time, members of the Guard's senior leadership earned their pilot's wings. Brig. Gen. George B. Bennett, the assistant TAG of Idaho, was the first Guard general officer to earn a fixed wing rating in 1959, and in the process, became the first ARNG general officer to attend flight training at Fort Rucker. Two years later, General Bennett also earned a rotary wing rating, making him the first general officer in the National Guard to become qualified on both types of aircraft. In January 1963, Maj. Gen. Henry V. Graham of Alabama became the first TAG to hold a rating as a school-trained Army aviator. The direct, increased participation of general officers in ARNG aviation would help guarantee the program's success in coming years.[34]

A number of important improvements came to the ARNG flying force in the years immediately

afterward. The first was the start of a comprehensive, nationwide safety program. NGB held the first national aviation safety conference in Chicago in March 1963. Primary attendees from the states included the full-time state aviation training and maintenance officers. The Army had never held such a conference, and it sent several representatives from major commands to discuss the shared objective of reducing aircraft accident rates. The Federal Aviation Administration participated as well. The upshot of the meeting was the beginning of a concept for the development of a flight standardization program for the entire Army. In the following years, the concept would take shape through various publications and programs that brought safety to the forefront of consideration in flight operations.[35]

Safety received an important boost in the summer of 1964 when ARNG aviators received authorization for increased drill periods. In addition to the forty-eight training assemblies that constituted the annual training cycle, aviation units received an additional twenty-four training assemblies as a means of increasing available flight time. At the same time, more units began to convert to weekend drill to create larger blocks of time and allow more daylight hours for flying. At the same time, NGB took steps to halt "cow pasture" flying by centralizing flight activities in the states, permitting closer supervision of flight operations, and hiring full-time training supervisors at each flight facility with twenty or more pilots. By 1964 the ARNG's aircraft accident rate stood at 24.4 major accidents per 100,000 flying hours; in contrast, the active Army's stood at 25.4. (The definition of a major accident at the time was any flying mishap that required more than seventy-five man-hours of work for aircraft repairs.)[36]

The increased size of the aircraft fleet, with its combination of rotary and fixed wing aircraft, made maintenance more of a challenge. NGB acknowledged that additional resources were necessary to create a more robust maintenance capability within the ARNG. In 1957, the Bureau had convened a special board of general officers to study and recommend changes to aviation maintenance regulations, procedures, manning tables and space criteria for maintenance shops. However, it took a number of years for real change to materialize.[37]



Spc. 5 Ralph McNiece installs a propeller on an L-19 Bird Dog radial engine as part of his work at the 217th Transportation Aircraft Repair Battalion in Fresno, California, in 1962. *National Guard Educational Foundation*

In 1962 the ARNG established three battalion-sized, depot-level aircraft maintenance shops. The locations selected were: Groton, Connecticut; Springfield, Missouri; and Fresno, California. The new units reflected the Army's increased responsibility for the depot-level repair of aircraft that had occurred a few years earlier. Each shop was allowed a cadre of fifty, full-time state technicians who also held drilling status in the newly created aircraft maintenance and supply battalion which served as each shop's parent unit. The facilities became operational that same year, providing the ARNG with a limited depot rebuild capacity. In 1963, the three repair sites became

affiliated with Army depots in Pennsylvania, Texas and California and expanded their workloads to included maintenance on active duty, Guard and Reserve aircraft.[38]

Members of the 142nd TARS in Springfield, Missouri, recondition a U-6A Beaver in their workshop in 1969. *National Guard Educational Foundation*

Starting in 1965, the three maintenance battalions were renamed Transportation Aircraft Repair Shops (TARS) and given new numerical designations: the 162nd Transportation Battalion (CT), the 142nd Transportation Battalion (MO), and the 217th Transportation Battalion (CA). In addition to the name change, the mission of the TARS was expanded to include general support aircraft maintenance, including maintenance support to units during annual training and major field exercises.[39]

One of the backbones of the ARNG aviation program appeared in the early 1960s: the first Army Aviation Support Facilities (AASF). The intent of the AASF was to provide a modern facility for the performance of organizational and field maintenance on all types of aircraft. The shops were authorized on the basis of one per state for each state having at least five assigned aircraft. In those states with more than one ARNG combat division, two AASFs were allowed. By 1962, thirty-three AASFs were open or under construction. In addition, flying units occupied another twenty-two leased facilities that served as flight operations and maintenance centers.[40]

Another development was the introduction of flight training simulators and mobile training teams. Though primitive by today's modern standards, the austere, box-like simulators of the day imparted the skills of instrument flying in all-weather conditions. Simulators allowed aviators to receive flight training during short drill periods and saved costs associated with actual flight operations. At the same time, the Guard began to use consolidated, mobile training teams across the nation. Operating from centralized locations, training teams visited the states on a regular basis. As a rule, they taught Guardsmen the use of new electronics and maintenance equipment. Both initiatives displayed the willingness of citizen-soldiers to make use of the best available technology.

At the end of 1963, ARNG aviation included a total of 885 aircraft: 582 fixed wing and 303 rotary wing. The pilot population had grown to 1,513 personnel, but this represented less than half of the over 3,500 aviators authorized by TOE. Sixty-five flight simulators supported training.

Mobile training teams became common starting in the late 1950s. In an effort to enhance continuing education for ARNG aviators, a "flying classroom" was developed by the Aircraft Radio Corporation and the New Jersey Guard. A company representative flew in an L-20 Beaver to seventeen different AT sites during 1958, conducting classes on new radio gear to as many flyers as possible. *National Guard*

The activation of three battalion-level maintenance units and the construction of AASFs nationwide gave the Guard a respectable maintenance capability. In only fifteen years, the aviation program had grown greatly in size and complexity, and even more dramatic changes were just around the corner.[41]

A pilot of Alabama's 31st Aviation Company prepares to lift off in an H-34 Choctaw from Cairns Army Air Field at Fort Rucker in 1967. *Army Aviation Museum*

## The Vietnam War

Even before the onset of the Vietnam War, two major developments occurred that set the stage for the extensive deployment of aviation assets in Southeast Asia. In early 1960, the Army convened the Rogers Board, a group of senior generals to consider aircraft requirements for the coming decade. The group recommended phasing out the Army's older helicopters and replacing them with the new UH-1 Iroquois and CH-47 Chinook. An even greater decision came two years later with the findings of the Howze Board, chaired by General Hamilton H. Howze, one of the true pioneers of Army aviation. The Howze Board determined that Army aircraft could provide the airmobile assets necessary to enhance the combat effectiveness of ground forces. To test the concept, the board recommended the creation of a test-bed unit: the 11th Air Assault Division at Fort Benning, Georgia. The division proved viable, and in July 1965, was redesignated as the 1st Cavalry Division (Airmobile). In September 1965 the 1st Cavalry Division deployed to South Vietnam as part of America's initial buildup of major combat forces.[42]

During the Vietnam War, the Army recalled nearly one hundred L-19 Bird Dogs from the ARNG. Two Nebraska pilots complete the paperwork necessary to turn their aircraft back to the Army in August 1968. *Nebraska National Guard Historical Collection*

Airmobility and Army aviation came to dominate the Vietnam War as rotary wing aircraft were integral to nearly every aspect of the conflict. For "grunts" in Vietnam as well as civilians watching on television at home, the UH-1 "Huey" helicopter became the iconic symbol of the war. MEDEVAC Hueys, with signature red crosses painted on their side doors, were responsible for saving 320,000 lives. The

Army's first attack helicopter, the AH-1G Cobra, debuted in Vietnam. The CH-47 Chinook earned a well-deserved reputation as a hauler of troops, equipment and supplies to remote locations, even those under fire. Observation helicopters, such as the OH-6 Cayuse, carried ground commanders aloft, affording them better command and control. Fixed wing aircraft served as well, especially for observation and reconnaissance. Army aviation matured in Vietnam by proving its ability to work not only with the Army's other combat arms but with other services as part of joint operations. The undeniable lesson from Vietnam was that aviation would be an even more integral part of the Army's future doctrine and tactics.[43]

President Lyndon B. Johnson made the key decision to avoid a national mobilization during Vietnam for fear of expanding the conflict beyond Southeast Asia and drawing in Red China and the Soviet Union. Instead of mobilizing the National Guard and Reserve, the president decided to fight the war using active forces and draftees. For the first time, the nation was to go to war without the widespread use of citizen-soldiers. Eventually the war's unpopularity and political divisiveness resulting from the draft prompted a social backlash and an end to the war, but not for many years.

The lack of a reserve component mobilization aside, as many as 2,000 National Guard members volunteered for active duty to serve in Vietnam during the conflict's early years. Among them were as many as two hundred ARNG aviators. Almost half of them were junior officers and warrant officers who had graduated from Army flight training. Others were seasoned veterans with considerable experience. At least one was killed in action in July 1967; Chief Warrant Officer Henry C. Cauthen, a volunteer from Mississippi's Company A, 21st Aviation Battalion.[44]

Citizen-soldier pilots repeatedly proved their mettle in combat. Among them was Chief Warrant Officer Gerald Devine of Oklahoma. A former fighter pilot, Devine was a triple ace from World War II and had flown jets in combat during Korea. He had joined ARNG aviation lured by the sheer joy of piloting the L-19 Bird Dog and flew the same aircraft in combat as a volunteer with the 75th Reconnaissance Airplane Company stationed in Xuan Loc. In an incredible year of flying in heavy combat, Devine received two Distinguished Flying Crosses, the Bronze Star and twenty-seven Air Medals. He also achieved the distinction of receiving the Vietnamese Cross of Gallantry for landing his aircraft in the middle of a firefight to evacuate two gravely wounded South Vietnamese soldiers.[45]

ARNG aviation suffered many negative effects during the Vietnam era. Casualties and the Army's twelve-month rotation policy in Vietnam created a voracious appetite for pilots, crew members and support personnel. The Army made the decision in 1965 to prohibit Guardsmen from attending schools at Fort Rucker in an effort to train more active duty personnel and draftees. Between 1965 and 1969, not one Guard member trained at Rucker. For the first time, the ARNG flight program experienced year-to-year losses in the number of qualified pilots. In 1965, the pilot population had reached an all-time high of 1,885; four years later the number had dipped to 1,640. Some losses were due to Guard pilots entering active duty, but the elimination of training seats at Rucker was the major inhibitor.[46]

The Guard reached into its own pocket in an effort to compensate for the loss of training seats. A proposal was made for the creation of the ARNG's own flight training course. The Army acknowledged the need for the Guard to maintain its flight readiness and desired to develop an alternative capability for training pilots, especially in light of the expanding war effort. In 1967, the Army approved the Guard's plan. A rotary wing pilot training course was developed and implemented in Stockton, California. In its first year of operation, the Stockton facility trained twenty-one student pilots from fourteen states, with instructor pilots from the Army Aviation School administering final check rides.[47]

# Lt. Col. Jerome R. Daly

One of the most celebrated ARNG aviators of all time served as a volunteer during two duty tours in Vietnam, accruing a record of gallantry second to none. Jerome R. Daly began his career as a citizen-soldier by enlisting in the Pennsylvania ARNG in 1949. He was commissioned as an officer in 1954, learned to fly as a Guardsman while attending school at Fort Rucker, and was a fully rated Army aviator by 1958. Afterwards, he was a member of Company B, 28th Aviation Battalion of the 28th Infantry Division where he was the senior technician and flight standardization officer. Motivated to serve in Vietnam, Daly took a reduction in rank to warrant officer in 1965 in order to volunteer for active duty.

He was soon posted to Fort Rucker as an instructor. There he demonstrated talents as a proven expert in aviation operations, maintenance, and the development of innovative tactics and doctrine. By 1966, he was the leading instructor at the U.S. Army Aviation Center for helicopter gunnery. Daly was not only noted for his fine gunnery skills but also for his efforts in modernizing and improving aerial gunnery training.

Jerome Daly soon put his skills to work in the mountains and rice paddies of South Vietnam. In March 1967, while serving as an attack helicopter pilot and maintenance officer with the 121st Helicopter Company in Soc Trang, he heroically helped in the rescue of three downed helicopter crews threatened by two Viet Cong battalions. He completed twelve separate low-level runs through a hail of enemy fire to lay down a smoke screen to allow a rescue ship to recover the downed air crew members. He survived the dangerous situation, though his aircraft was damaged beyond repair. For this action, Daly was awarded the Distinguished Service Cross.

After the completion of an eighteen-month combat tour, Daly returned to Fort Rucker as an instructor. However, he soon volunteered for duty again in Southeast Asia. His second tour included extensive combat operations. On one occasion, an enemy bullet punctured one side of his flight helmet, circled halfway around the helmet's outer casing and exited the other side without leaving a scratch. In addition to the Distinguished Service Cross, he received two Silver stars, three Distinguished Flying Crosses, two Purple Hearts and more than seventy Air Medals. By the time his second tour ended, he had logged more than 4,900 hours of flight time; 2,200 of them were as an attack helicopter pilot. Shortly thereafter, AAAA honored him as its Army Aviator of the Year.

Jerome Daly was once again commissioned as an officer following Vietnam and continued to make significant contributions to Army aviation. As a lieutenant colonel, he commanded the 4th Battalion, 1st Aviation Brigade. In August, 1982, he retired from military service. The following year he was inducted into the Army Aviation Hall of Fame at Fort Rucker.

Heavier helicopters first appeared in the ARNG during the Vietnam era. An H-34 Choctaw from Alabama's 31st Aviation Company lifts a jeep during AT at Fort Rucker. *Army Aviation Museum*

As in previous conflicts, the Army took aircraft from the Guard for use in Vietnam. In all about one hundred L-19s were returned to active duty. As replacements, the Army agreed to provide legacy aircraft displaced by its fielding of the UH-1 and the CH-47. The ARNG took delivery of the largest and most powerful and complex helicopters it had yet flown: the H-19 Chickasaw and the H-34 Choctaw. Still, the Vietnam War had a large affect on the management of these helicopters. Repair parts were hard to come by for the H-19, and maintainers kept most of the fleet flying through a strict, authorized program of controlled cannibalization, whereby mechanics removed needed parts from aircraft already inoperative in order to keep others flying. Evicted from the school house at Rucker, the Guard once again turned to its own means to acquire qualified pilots and mechanics for the H-34. With the Army's blessing, the ARNG opened H-34 pilot transition and maintenance courses at the flight facility in Davenport, Iowa. With bigger helicopters in the fleet, the need arose for trained crew chiefs and other crew members. By the end of 1968, 130 enlisted crewmen were on flying status.[48]

The 1960s were a turbulent period of social change prompted by the civil rights movement and growing opposition to the Vietnam War. As widespread rioting wracked many American cities, ARNG aviation became an integral part of riot control operations. Guard helicopters performed reconnaissance missions that provided civil authorities, state troopers and local police with real-time information on the locations and activities of large crowds and rioters. When violence erupted on the campus of the University of Alabama in Tuscaloosa in the summer of 1963, the state organized a special detachment of the most seasoned personnel available from the 107th Transportation Company in Birmingham for special duty. Flying three H-23s and three fixed wing aircraft over the campus, the pilots maintained an air patrol that fed authorities below continuous information. As widespread rioting engulfed the nation in 1968 in the aftermath of the senseless assassinations of Senator Robert F. Kennedy and Dr. Martin Luther King, Jr., ARNG aviation supported authorities during riots in Chicago, Detroit, Memphis and Selma.[49]

To improve methods of crowd control in 1968, a team from the Iowa ARNG innovated a way to mount an M3 chemical agent disperser onto an H-23 helicopter. Tear gas was released onto crowds during low level passes when the pilot triggered a foot pedal in the cockpit floor. *National Guard Educational Foundation.*

When riots became even more violent, ARNG aviation took a direct role in crowd control. On a number of occasions, Guard aviators dropped tear gas canisters on crowds in an effort to cause them to disperse. At other times, mechanics improvised tear gas dispersal devices, mounting them on helicopters. Flying at low level, ARNG choppers doused violent crowds with plumes of tear gas. At the University of California at Berkeley in the late spring of 1969, Guard helicopters sprayed tear gas on violent mobs that had defied exploding stun grenades from the police. Plumes of tear gas dispersed by air affected many not directly involved in the altercation, and the media heavily criticized authorities. On the campus of North Carolina A&T University in Greensboro, Guardsman mounted a joint air-ground movement against armed militants who had taken control of a major dormitory. After multiple shots were fired on both sides, aviators dropped tear gas as Guard forces and police cleared the building of armed rioters.[50]

The image of MEDEVAC missions in Vietnam and their proven worth in saving lives prompted an important, experimental program at home. In 1969, the Nebraska Guard utilized H-19Ds of the 24th Medical Company (Air Ambulance) to conduct "Operation Sky-Aid," an effort to determine the feasibility of air evacuation of accident victims along America's growing interstate highway system. In little more than a year, ARNG aviators flew more than 140 hours during rescue missions that included almost eighty doctors and police officers. The key to the experiment's ultimate success was the integration of civil-military assets. Arizona, California, Florida, Mississippi and Ohio soon started their own MEDEVAC operations. Ultimately, civilian companies proved more efficient in providing the service, but the impetus for the network of air evacuation services that have become so prevalent in America began with the ARNG.[51]

The Tet Offensive and the seizure of the USS *Pueblo* in the waters off North Korea in early 1968 finally forced President Johnson to mobilize portions of the reserve components for the Vietnam War. On April 11 he issued an executive order mobilizing 24,500 members of the National Guard and Reserve. A month later, 13,633 ARNG members from seventeen states reported for active duty. To augment the forces in Vietnam as well as the CONUS reserve, the ARNG mobilized a balanced force of thirty-four combat, combat support and combat service support units. Two ARNG brigades were ordered to active duty: the 29th Infantry Brigade in Hawaii and the 69th Infantry Brigade from Kansas. Twenty-two combat support and nine combat service support units quickly deployed to various Army posts for extended duty or for pre-deployment training. Of those mobilized, 2,729 Guardsmen in eight units actually deployed to Vietnam. In addition, hundreds of individuals serving in the two activated brigades volunteered for duty in Southeast Asia.[52]

Starting in 1969, the 24th Medical Company, Nebraska ARNG, took part in an experimental program to provide aeromedical evacuation from accident sites along the state's expansive interstate highway system to nearby hospitals. The experiment was a great success, setting the stage for the creation of a nationwide system of civilian aeromedical services. *Nebraska National Guard Historical Collection*

The ARNG mobilization for Vietnam included two separate aviation units. The 40th Aviation Company from Long Beach, California, mobilized with 112 officers, warrants and enlisted personnel on May 13, 1968, and deployed to Hawaii where it was attached to the 29th Brigade at Schofield Barracks. Once in Hawaii, eighteen officers and warrant officers as well as thirty-eight enlisted men all volunteered to fight in Vietnam.

Sgt. Jerry Cooper and Spec. 4 Frank Hutton, both mobilized members of the 40th Aviation Company in September 1969, replace a wing fairing after making electrical repairs on a U-6 Beaver belonging to the 29th Infantry Brigade at Schofield Barracks, Hawaii. *National Guard Educational Foundation*

They flew and maintained fixed wing and rotary wing aircraft from the Mekong Delta in the south to the Demilitarized Zone in the north. In the process, they established an impressive combat record. Collectively, the group earned one Distinguished Service Cross, eleven Distinguished Flying Crosses, five Silver Stars, sixteen Purple Hearts and fifty-seven Air Medals. Those remaining on Oahu did a myriad of tasks including participating in joint training exercises and rescue operations during local emergencies.[53]

The 169th Aviation Company from Kansas City entered active duty on the same day as their fellow Californians. With 114 personnel, the 169th moved to Fort Carson, Colorado, for active duty.

## 1st Lt. Vernon L. Klinger, Jr.

The only mobilized Guardsman to earn a Distinguished Service Cross during the Vietnam War was 1st Lt. Vernon L. Klinger, Jr. A distinguished graduate from the California OCS program in 1957, Klinger was an administrative officer in the 40th Aviation Company when it was mobilized for Vietnam. Soon after entering active duty, he volunteered for Pathfinder training.

In Vietnam, Klinger was assigned to the 52nd Aviation Battalion, 1st Aviation Brigade. On May 22, 1969, as soon as he and his four-man Pathfinder team were inserted into Landing Zone Yankee near Dak To to prepare for a follow-on assault, they came under intense small arms fire from the surrounding forest. As the helicopter which delivered them lifted off, Klinger led his men into the shelter of a bomb crater.

Lieutenant Klinger deployed his team to cover their perimeter, all the while directing their fire against enemy concentrations preparing to rush the crater. While moving from man to man, he was wounded in the leg by grenade fragments, but he continued in command. As North Vietnamese forces edged closer, the lieutenant radioed for helicopter gunship support and requested a bombing run only fifty meters from his position. Air Force fighter-bombers dropped several 750-pound bombs right on target, breaking the enemy's formation and compelling them to withdraw. After the battle, forty-one enemy bodies were found in the immediate vicinity of the crater.

For his extraordinary leadership, Lieutenant Klinger was awarded the Distinguished Service Cross. The California Guard recognized him by naming a hallway of their OCS building in his honor. Klinger stayed on active duty afterwards and retired from the Army as a lieutenant colonel. He passed away at the American Lake Veterans Hospital in the state of Washington in 2007.

The welcome home ceremony for the 40th Aviation Company at Long Beach, California, on December 13, 1969. Shown from left to right are: Col. Leroy Goforth, Commander, 76th Aviation Group; Capt. Brandt, Commander, 40th Aviation Company; Sgt. 1st Class Solon Wood, Maintenance Technician; and Col. McClanahan, Deputy Chief of Plans, Policies and Programs, NGB. *National Guard Educational Foundation*

After a two-week training period, members of the company were free to volunteer for combat. Fourteen officers, ten warrant officers and twenty-five enlisted personnel volunteered for Vietnam. By the time their tour ended, the group had earned one Distinguished Flying Cross, seven Bronze Stars and twenty-six Army Commendation Medals. Those remaining at Fort Carson provided general support to the Army's 5th Infantry Division. Both ARNG aviation units mobilized were released from active duty by mid-December 1969.[54]

By the close of 1969 most Guard aviators had returned from active duty in Vietnam. At the time, the total ARNG flying force included 1,640 pilots. The aircraft inventory consisted of a balanced fleet of over 800 aircraft split nearly even between fixed wing and rotary wing. Four different types of fixed wing planes were in use as well as four different types of helicopters. The development of the ARNG aviation force in the first twenty years of its existence had been impressive in almost every aspect. The next two decades would bring even more dramatic change.

Mechanics from Puerto Rico's 153rd Aviation Company working on their H-34 Chickasaws in 1968. *National Guard Educational Foundation*

[1] NGB, *Annual Report*, 1948, 16.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Ibid.; NGB, *Annual Report*, 1949, 46; and NGB, *Annual Report*, 1951, 21.

[6] Maj. Gen. Kenneth F. Cramer, "Report to the Conference," *National Guardsman*, December 1949, 9.

[7] NGB, *Annual Report*, 1951, 26.

[8] *National Guardsman*, June 1948, 29.

[9] Jason LeMay, Sgt. 1st Class John M. Trowbridge, and Chief Warrant Officer 4 Harold Canon, *Kentucky's Flying Soldiers: A History of the Kentucky Army National Guard's Fixed Wing Aviation* (Frankfort, KY: Office of the Adjutant General, September 2006), 25-31.

[10] Ibid.

[11] Ibid.

[12] "The Foundational Forties," *Army Aviation*, September 15, 1960, 465-73.

[13] Herbert L. LePore, *History, Heraldry and Spirit of United States Army Aviation* (Fort Rucker, AL: U.S. Army Aviation Center and Fort Rucker, n.d.), 2, 13-15.

[14] Ibid.

[15] Ibid.

[16] "In Combat…In Korea," *National Guardsman*, July 1951, 20-21.

[17] NGB, *Annual Report*, 1951, 22.

[18] Ibid., 18.

[19] "The Controversial Fifties," *Army Aviation*, September 15, 1960, 485-86.

[20] Ibid.

[21] LePore, *Army Aviation*, 16-17.

[22] NGB, *Annual Report*, 1953, 18; and "Army Guard to Get 1,000 Planes and Copters," *National Guardsman*, December 1952, 22.

[23] NGB, *Annual Report*, 1954, 21; and NGB, *Annual Report*, 1959, 45.

[24] NGB, *Annual Report*, 1955, 22.

[25] NGB, *Annual Report*, 1952, 19; NGB, *Annual Report*, 1954, 17; NGB, *Annual Report*, 1957, 30; and NGB, *Annual Report*, 1959, 41

[26] "Guard Battles Hurricane Floods," *National Guardsman*, October 1955, 23-24; and "Guard Speeds Salk Shots," *National Guardsman*, 1955, 27.

[27] NGB, *Annual Report*, 1959, 41.

[28] "Aircraft Accidents," *National Guardsman*, October 1956, 20.

[29] NGB, *Annual Report*, 1962, 9-13.

[30] NGB, *Annual Report*, 1962, 56, 60.

[31] "Ex-Gunners, Ex-'Doughs' Prove Versatility in Active Duty Air Ambulance Role," *National Guardsman*, August 1962, 13-14.

[32] "Maintain Choppers; 'Soldier', Too," *National Guardsman*, April 1962, 22; and "The Army National Guard in the Berlin Crisis," *National Guardsman*, September 1962, 13, 34.

[33] NGB, *Annual Report*, 1962, 10.

[34] "ARNG General Officer Copter Qualified," *Army Aviation*, August 1961, 477; and *National Guardsman*, January 1963, 21.

[35] NGB, *Annual Report*, 1963, 45.

[36] NGB, *Annual Report*, 1965, 31; and "Army Guard Aviators Get More—And Longer—Drills," *National Guardsman*, February 1964, 17.

[37] NGB, *Annual Report*, 1957, 45.

[38] NGB, *Annual Report*, 1962, 60; and NGB, *Annual Report*, 1963, 48.

[39] NGB, *Annual Report*, 1966, 36.

[40] NGB, *Annual Report*, 1962, 63.

[41] NGB, *Annual Report*, 1963, 44-45, 48.

[42] LePore, *Army Aviation*, 20-23.

[43] Ibid.

[44] "Guardsmen in Vietnam," *National Guardsman*, March 1968, 22, 26-27.

[45] Ibid.

[46] NGB, *Annual Report*, 1969, 73.

[47] NGB, *Annual Report*, 1967, 25.

[48] NGB, *Annual Report*, 1967, 25; and NGB, *Annual Report*, 1969, 32-33.

[49] "Civil Disturbance Duty: Tuscaloosa, Alabama," *National Guardsman*, August 1963, 9-11; and "The Guard in the April Disorders," *National Guardsman*, May 1968, 6, 10, 13, 16.

[50] "These Troubled Times," *National Guardsman*, July 1969, 24-27.

[51] "Sky-Aid: 'Chopper' Mercy Missions Tested," *National Guardsman*, Nov. 1969, 22-23, 37.

[52] NGB, *Annual Report*, 1968, 10.

[53] NGB, *Annual Report*, 1968, Appendix L, 80; *National Guardsman*, November 1969, n.p.; and "Pearl Harbor Day," *National Guardsman*, January 1970, n.p.

[54] State of Kansas, Military Department, Office of the Adjutant General, "Resume of 1968-69 Mobilization: 169th Aviation Company," December 13, 1969, 1-4.

# CHAPTER THREE

## THE ERA OF TOTAL FORCE POLICY, 1970-1989

For the U.S. military, the decades of the 1970s and the 1980s were the proverbial "best of times, worst of times." The end of the Vietnam War brought significant, lasting change to the nation's defenses. The termination of the draft in 1973 prompted the implementation of the all-volunteer Army. Public demands for smaller defense budgets and force reductions resulted in even more fundamental change. When President Ronald W. Reagan took office in early 1981, the rebuilding of the nation's defenses became a top priority. With the military's reputation once again on the rise, defense budgets were restored and new weapons and equipment became available.

Army aviation was deeply affected by current events. While aviation had earned a respectable and significant fighting record in Vietnam, detractors questioned the ability of rotary wing aircraft to fight and survive in a predicted high intensity combat environment rich with sophisticated enemy air defenses. The Army was compelled to lose a large number of experienced pilots due to mandatory reductions in force, and cuts in defense spending killed helicopter modernization programs. Still, aviators pressed ahead, energized by the fervor of Vietnam era veterans and the promise of new concepts, especially an advanced attack helicopter and proposals for combat aviation brigades. At the same time, in anticipation of a major war in Europe, Army aviators sought closer ties with the Guard and Reserve. A watershed event occurred in 1983 with the establishment of aviation as the Army's newest combat arm.

An H-21 Shawnee from California's 140th Aviation Battalion, 40th Armored Division, lowers a pallet of 5-gallon water cans during annual training at Camp Roberts. *Army Aviation Museum*

The two decades following Vietnam forever changed the face of ARNG aviation. The force more than doubled in size in terms of manpower and aircraft. As part of the personnel expansion, women aviators appeared for the first time. The helicopter came to dominate in all of its forms: utility, cargo, observation and attack. To provide national management for this larger, more complex force, the National Guard created a separate ARNG Aviation Division. At the same time, the Guard created a new network of training and maintenance sites to provide its own internal capability to sustain the flying force. New missions altered the face of training as ARNG aviation units sought to prepare themselves to participate in a major conflagration in the central NATO region.

## The Total Force Policy

At the close of the Vietnam War, the Pentagon turned to the National Guard and Reserve to fill the void in active forces caused by drastic cuts in manpower and resources. In August 1970, Defense Secretary Melvin R. Laird espoused a "Total Force" concept that called for the reserve components to bear more of the direct burden for national defense. Laird called for the reserve components to become the "initial and primary source" for reinforcing Regulars in any emergency. Despite Secretary Laird's guidance, the application of the Total Force concept across the services was inconsistent and uneven.[1]

Having just dropped a squad of soldiers off for training, a H-37 Mojave of Illinois' 33rd Infantry Brigade takes off for another load in 1968. A new generation of Army helicopters would soon fill ARNG flying units. *National Guard Educational Foundation*

On August 22, 1973, Secretary James R. Schlesinger, Laird's successor, converted the Total Force concept into a more concrete program with a forceful memorandum that promulgated the "Total Force Policy." Total Force was no longer only a concept; the services were to integrate their active and reserve forces "into a homogeneous whole." Schlesinger emphasized that the Guard and Reserve were the initial, primary, and sole augmentation to active forces. While he acknowledged that the services had made progress in reserve component integration, Schlesinger declared that reserve units had not yet achieved the readiness standards required for wartime contingencies. Secretary Schlesinger directed the Army and the other services to provide the resources necessary to improve reserve component readiness.[2]

The Total Force Policy's implications for the relationship between the Regular Army and the ARNG were profound. Overall, the policy called for an equal partnership between the two. Without the peacetime draft, which had run continuously since 1948, the Army would have to better integrate ARNG manpower and units as a potential source of combat power. Because of its

Maj. Gen. Francis S. Greenlief (right) receives an Army Aviation School plaque upon his completion of the fixed wing aviators' course at Fort Rucker in 1969. Making the presentation is Maj. Gen. Delk Oden, the Commander of Ft. Rucker. General Greenlief would soon become the Director, ARNG and finally Chief, NGB. He was a strong advocate of military aviation, becoming the only general officer in the National Guard ever to become rated in both Army and Air Guard aircraft. *National Guard Educational Foundation*

smaller size in the aftermath of Vietnam, the Army would have to rely more than ever on the ARNG in any conflict of considerable size and duration.

The debut of the Total Force Policy resulted in a sea change in the relationships between Army and ARNG aviators. After nearly a decade in Vietnam, Regular Army aviators had to again reacquaint themselves with citizen-soldiers. In the years that followed, the two would become skilled at working together again, even closer than before. They learned to take advantage of the other's strengths while augmenting the other's weaknesses. As a result, the aviation community as a whole was able to weather the difficult decade of the 1970s and to build a new foundation of strength during the 1980s.

## The Vietnam Drawdown

The Paris Peace Accords of 1973 marked the formal end of hostilities in Vietnam, but by that time, the Army's drawdown of personnel and equipment had already begun. The American people were tired of war, demanding an end to the draft and the withdrawal of troops from Vietnam well before the peace talks started. There was little support for continued military spending, a sentiment that resulted in massive cuts in defense budgets and a reduction in force among active duty personnel starting in 1970.

In 1971 Georgia's 151st Aviation Battalion became the first Army Guard unit to receive the OV-1B Mohawk. The Mohawk was a long-range surveillance aircraft, using its side looking radar—the long tube underneath—to track enemy troop movements from a distance. *Army Aviation Museum*

The close of the Vietnam War presented Army aviation with a dilemma. How was it to carry out reductions in personnel and equipment while not sacrificing the great wealth of experience and numbers of aircraft accrued during the war? The Total Force Policy provided a ready solution. The Army turned to the National Guard in an effort to preserve its large force of experienced pilots and aircraft. The retention of these assets in the ARNG would save the Army money and preserve the overall experience level of the aviation force. The result for the Army Guard was an unprecedented explosion of aviation assets.

One of the most significant hallmarks of ARNG aviation in the early 1970s was the tremendous growth in manpower. The very first policy change to come from the winding down of Vietnam was the return of ARNG personnel to the Fort Rucker school house. No longer exclusively focused on the instruction of Regulars and draftees, the Aviation Center in 1970 reopened its initial flight training courses to citizen-soldiers for the first time in five years. The first training seat went to Warrant Officer Donald J. Love of the Nebraska ARNG who attended the Officer and Warrant Officer Rotary Wing courses. He completed instruction in March 1970 as an honor graduate.[3]

After a five-year drought, the ARNG was inundated with available aviation training seats at Fort Rucker and elsewhere. In July 1970 the Army opened an unprecedented number of school quotas for initial flight training. The states responded enthusiastically, and as a result, 474 Guardsmen attended flight training during the year. The need for maintenance training was apparent as well, especially with the ARNG receiving larger numbers and newer models of helicopters. The ARNG moved on its own to make arrangements with the Sikorsky Aircraft Corporation for contracted maintenance

instruction. By the end of the year, state aviators had filled a total of 10,443 training seats in formal aviation courses. In 1970 alone, the number of Guard aviators on flying status increased from 1,640 to 2,087, an all-time high.[4]

A second and even greater infusion of personnel came from the recruitment of Army aviators involuntarily forced from active duty. NGB decided to aggressively recruit among this population of trained and experienced aviators and determined that the best time to sign them up was while they were still on active duty. The Guard Bureau formed three-man recruiting teams who visited major Army installations with an aviation population of one hundred or more.[5]

Chief Warrant Officer 4 Frederick E. Ferguson, a Huey pilot serving with the 1st Cavalry Division in Vietnam, was awarded the Medal of Honor for his heroism in rescuing wounded soldiers despite intense enemy fire that crippled his aircraft. After the war, he brought his expertise to the Arizona Guard when he joined its 997th Aviation Company in 1972. *National Guard Educational Foundation*

The recruiters found fertile ground. The economy was in recession in the early 1970s, and job opportunities for pilots were scarce. Aviators caught by the reduction in force faced an uncertain future, and service in the ARNG seemed to many the best way to retain their flight status while enjoying the camaraderie of other Vietnam veterans and creating opportunities for additional pay. Recruiters identified those with a genuine interest in Guard service, and during individual interviews explained the benefits of serving in the ARNG as well as the obligations. The arrangement was mutually beneficial, and as a result, a tide of experienced aviators forced from active duty joined the Army Guard.[6]

The combination of renewed training opportunities and the recruitment of experienced aviators caused unprecedented growth in the pilot population throughout the 1970s. (See Table 1.) In 1971 alone, the number of assigned pilots on flight status grew from 2,087 to 2,826, an increase of 35 percent in only twelve months. The following year, the number of aviators surpassed 3,000 and continued growing. By the time of the celebration of the American Bicentennial in 1976, the number of qualified pilots had reached a new peak of 4,767. Just as significantly, the increase in personnel allowed the ARNG to close the historic, persistent gap between authorized and assigned personnel. At the end of 1979, authorized pilot strength was 4,716, with assigned strength standing at 4,674, an unprecedented 99.1 percent level of fill.[7]

With the receipt of larger, more modern helicopters, commensurate increases followed in the number of crew members. Enlisted crew members became a permanent and omnipresent

Enlisted women began playing a significant role in ARNG aviation in the early 1970s. Spc. 4 Kathy Temple was an air traffic controller with Iowa's 1105th Aviation Company while the unit was at annual training at Camp Ripley, Minnesota, in 1973. *Army Aviation Museum*

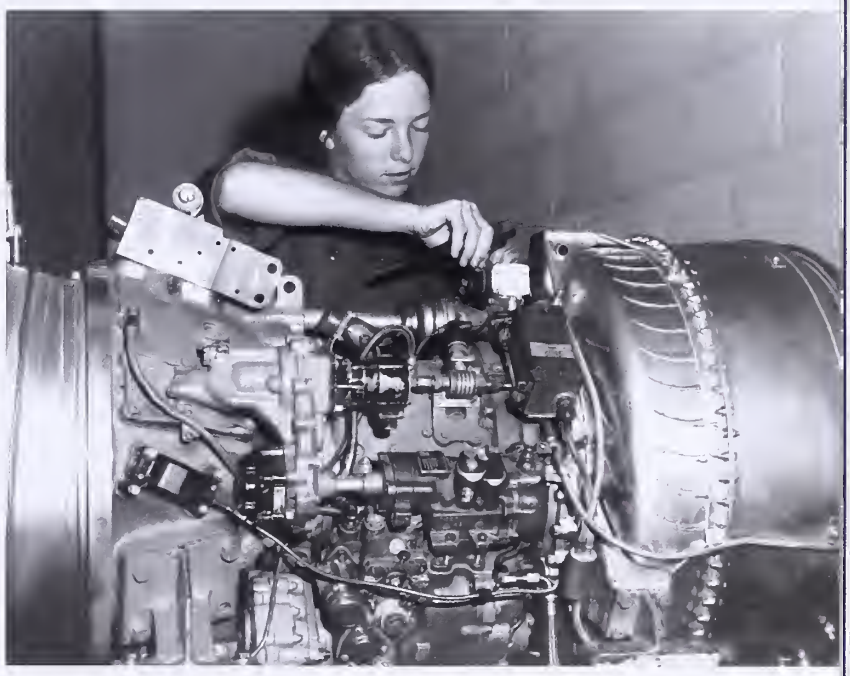
## TABLE 1. THE GROWTH OF ARNG AVIATION, 1969-1979

| Year | Aviators | Aircraft | | |
|---|---|---|---|---|
| | | Fixed Wing | Rotary Wing | Total |
| 1969 | 1,640 | 350[1] | 450[1] | 800[1] |
| 1970 | 2,087 | 293 | 605 | 898 |
| 1971 | 2,826 | 298 | 920 | 1,218 |
| 1972 | 3,617 | 166 | 1,524 | 1,690 |
| 1973 | 3,839 | 160[1] | 1,765[1] | 1,925 |
| 1974 | 3,981 | --[2] | --[2] | --[2] |
| 1975 | 4,336 | 156 | 2,272 | 2,428 |
| 1976 | 4,767 | 150 | 2,449 | 2,599 |
| 1977 | 4,737 | 154 | 2,410 | 2,564 |
| 1978 | 4,692 | 146 | 2,392 | 2,538 |
| 1979 | 4,674 | 128 | 2,416 | 2,544 |

Source: NGB, *Annual Reports,* 1969-1979
[1]Estimated number. [2]Data unavailable.

addition to the ARNG aviation force. In 1972, the number of assigned crewmen exploded from 346 to 982 personnel. In only two more years, that number nearly doubled to 1,801. The cadre of enlisted personnel on both flight and non-flight status continued to increase throughout the remainder of the 1970s.[8]

Another reason for the increased numbers of pilots and crew members was the debut of female aviators. Since 1636, the National Guard had largely been an all-white, male institution with only limited minority participation and women barred from service. The new policies of the all-volunteer Army and the massive, outward migration of Vietnam era volunteers prompted the recruitment of female soldiers starting in May 1972. An internal ARNG study concluded that female soldiers could serve in 37 percent of the Guard's authorized positions. In 1972, only 56 officer and enlisted women were in the ARNG; four years later, 11,000 females were on duty.[9]



In 1973, Pvt. 1st Class Linda Plock, from Nebraska's 24th Medical Company (Air Ambulance), became the first Guardswoman to complete the Army Aviation Maintenance Course at Fort Rucker, Alabama. *Nebraska National Guard Historical Collection*

Women made important advances in those early years, especially in aviation. Pvt. Linda Plock of the Nebraska ARNG was the first Army female ever—active, Guard or Reserve—to attend the aviation maintenance course at Fort Rucker in early 1974. Twelve years later, Sergeant Plock was a crew chief on a Huey assigned to Nebraska's 24th Medical Air Ambulance Company. At that time, she achieved another important milestone for Guard aviation, flying as a member of the ARNG's first all-female helicopter crew. In August 1974, the first female aviation warrant officer was appointed; Warrant Officer 1 Diane C. Dowd of Connecticut. She completed the grueling, nine-month rotary wing flight training course at Rucker in 1975, and afterwards, was assigned as a pilot with the 143rd Aviation Company in Hartford. In 1978 Jessica Garfola from Pennsylvania—later Jessica Wright—became that state's first female aviator.

In 1977, Lt. Jessica L. Garfola, a member of Pennsylvania's 228th Aviation Company, became the first female ARNG aviator to become rated in the CH-47. In March 2005, Maj. Gen. Jessica Wright became the first female general officer in the ARNG to serve as state adjutant general when she was sworn in as Pennsylvania's first female adjutant general. *Army Aviation Museum*

Within four years, she was qualified in both the CH-47 and the CH-54. For a time, she held the distinction as the Army's only female CH-47 pilot and Pennsylvania's only female aviator. It was the beginning of an outstanding and exceptional ARNG career that eventually propelled her to the rank of major general and appointment as TAG, Pennsylvania.[10]

Dramatic advances in personnel were more than matched by similar gains in the numbers of aircraft. In 1969 the ARNG aircraft fleet stood at nearly 800 airframes, almost balanced between fixed wing and rotary wing aircraft. Within three years, the fleet had doubled, with the greatest growth taking place in helicopters. At the same time, the number of different types of aircraft increased from eight to fourteen. The growth trend continued until the end of the decade. At the close of 1979, the ARNG included a total of 2,544 aircraft. The helicopter had come to dominate the fleet with only 128 fixed wing aircraft remaining in the force.

A closer examination of the growing number of aircraft reveals trends in the overall fleet. Not only was the fixed wing fleet cut in half, but it was greatly modernized. The venerable L-19 Bird Dog, which had served the Guard so reliably for nearly twenty-five years, eventually faded into aviation history. Along with it went the Otter and the Beaver. Newer, larger aircraft debuted, including the OV-1 Mohawk and the U-8 Ute. By June 1975, all states had been allocated a twin-engine, fixed wing aircraft.[11]

Not only did the number of helicopters greatly increase, but so did their capabilities. For the first time, the Guard flew utility, cargo and gunship helicopters. During 1970-1971, twelve CH-54 Skycranes and forty-nine UH-1 Hueys entered the fleet for the first time. The UH-1 was the ARNG's first turbine powered aircraft. Its increased hauling capacity made the Huey the first utility helicopter in the Guard really capable of full integration with ground units. The following year, twenty-nine CH-47 Chinooks were fielded to the states. By 1975, thirty units in twenty-eight states were equipped with Huey

Maj. Gen. Winston P. Wilson, Chief, NGB (left), accepts the log books of the ARNG's first five UH-1 Iroquois helicopters from Lt. Gen. William Peers, the Army's Chief of Reserve Components, in October 1970. Maj. Gen. Francis S. Greenlief, Director, ARNG, stands in the background at right. *National Guard Educational Foundation*

gunships armed with machine guns and guided missiles. During AT that year, Troop A, 158th Cavalry from Maryland became the first ARNG Huey gunship to fire an M-22 air-to-ground, wire guided missile. Throughout the 1970s, the numbers of modern helicopters steadily increased. At the time, they were considered first-line aircraft that promoted recruiting, retention and combat readiness.[12]

The first Army Guard units to receive UH-1 Hueys were the 71st Airborne Brigade and the 72nd Infantry Brigade, both elements of the Texas Guard. Pilots from one of the brigades conduct their preflight check before taking one of the new aircraft on a first flight. *National Guard Educational Foundation*

# UH-1 Iroquois

Officially named the "Iroquois," the UH-1 is more frequently know as the "Huey". Its familiar label came from the helicopter's original designation as the HU-1: soldiers naturally converted the official "HU" designation to the nickname Huey. Developed in the 1950s, it was adopted by the Army in 1959. Its shape and distinctive rotor beat became the iconic image of America's involvement in the Vietnam War.

UH-1s entered ARNG service in October 1970. The first Hueys went to Texas, and they were the UH-1D cargo or troop carrier variant that became most common throughout the Guard. These were quickly followed by more aircraft finding their way to every state by the middle of the decade. By the late 1970s, the Huey had replaced H-13s and H-23s as the main airframe of Army Guard aviation.

The UH-1 is powered by a Lycoming Y53-L-11 turbo shaft engine that can maintain a cruising speed of 135 mph and an operational ceiling of 10,000 feet. The D model can carry a maximum weight load of 3,900 pounds. This can be up to twelve combat loaded solders or cargo, or a combination of the two. The air crew consists of two pilots and one or two enlisted crewmen.

The ARNG has flown a number of Huey variants, but the most common are: the D model used for troop or cargo hauling; the C model gunship armed with outboard mounted machine guns and/or rocket pods; and the V model which is configured as a MEDEVAC ship with racks holding up to six litters. The last UH-1 assigned to an operational unit in the ARNG was retired in October 2009, marking the end of an era of almost forty years of service.

The Iowa Guard became the first to receive the CH-47 Chinook when it entered ARNG service in April 1971. Units in California and Texas began flying the CH-47 soon afterwards. *National Guard Educational Foundation*

The massive expansion of the aircraft fleet prompted a number of maintenance challenges. Just because the Guard was receiving aircraft cascaded from the active Army did not mean that flying machines were always in good condition. In fact, the ARNG received a significant number of aircraft that either failed routine maintenance checks or did not meet the minimum, established mechanical standards for equipment transfers. The Army used facilities in Europe as temporary storage sites for aircraft shipped from Vietnam. ARNG inspectors traveled to Europe to inspect and classify aircraft and repair parts before accepting them for stateside transfer. As a rule, the ARNG refused to accept as much as 30 percent of aircraft and materials because of their unsatisfactory condition.[13]

The ARNG's highly skilled maintenance personnel worked wonders to get aircraft into a serviceable condition. By the mid-1970s, aviation maintainers were able to achieve and sustain operational readiness rates that consistently met or exceeded the Army's established standard (70 percent mission capable rate) for all the types of aircraft the ARNG flew. With the UH-1's arrival, mechanics had to service and repair turbine and piston powered engines alike. NGB correctly concluded that the achievement of outstanding OR rates for aircraft was directly attributable to the "exceptional qualifications of maintenance technicians and supervisory personnel" assigned to the various maintenance facilities.[14]

The TARS program saw a number of improvements in order to meet increased workloads. The most obvious enhancement was the addition of another site, the 1108th TARS located in Gulfport, Mississippi. The 1108th's mission was to provide support to aviation units located in the southeastern United States and Puerto Rico. All of the TARS expanded their maintenance responsibilities during the 1970s. The major enhancements included the implementation of a repair parts direct exchange program and a special intensive management program for other selected repair parts. In addition, the ARNG assumed responsibility for all general support level maintenance functions that had formerly been done by active Army installations. In practice, the four TARS performed intermediate level and limited depot level maintenance, all of which became programmed and paid for by the ARNG.[15]

Two CH-54 Skycranes from the 137th Aviation Company, Kansas ARNG, take part in a multi-state emergency airlift of relief supplies and generators following a severe ice storm that devastated parts of Colorado and Nebraska in March 1977. *National Guard Educational Foundation*

Flight facilities also expanded to accommodate the newer, larger aviation force. By 1979, the ARNG managed a grand total of eighty-nine flight facilities, a number that included sixty-seven

Facility construction and expansion became necessary in the 1970s to provide hangar space and maintenance shops for the ARNG's expanding helicopter fleet. Pennsylvania's massive AASF #1 under construction in the mid-1970s; it opened for business in May 1975. The logo for the new AASF #1 is at insert. *Pennsylvania National Guard*

AASFs. Construction began early in the decade on the largest AASF of all, when ground was broken on Pennsylvania's AASF #1 at Fort Indiantown Gap. The massive building was completed and dedicated in May 1975 and went on to support future expansions of the Fort Indiantown Gap aviation complex.[16]

By the end of the 1970s, the organization and design of the ARNG aviation maintenance program was well established. All aircraft maintenance, up to general support, was the Army Guard's responsibility. Maintenance not performed during training periods by maintenance sections in organized units was accomplished by Guardsmen in their status as technicians. The AASFs each had a significant maintenance capability of their own, backed by the support of the four TARS on a regional basis. The entire integrated aviation logistics program was under the management of the Aviation Logistics Office located within the newly organized Aviation Division (NGB-AVN) at NGB.

Recognition from outside confirmed the great strides the ARNG was making in its aviation program. Starting in 1969, AAAA sponsored an annual award for the most outstanding reserve component aviation unit in the Army. The first unit recipient was the Iowa ARNG's 1105th Aviation Company (Assault Helicopter). The first seven recipients were all ARNG units, until a U.S. Army Reserve (USAR) aviation company earned the honor in 1976. New, separate awards for the ARNG and the USAR were instituted starting in 1985, but in the sixteen years of AAAA's initial outstanding reserve component unit award program, the ARNG earned the prize fourteen times.[17] (See Appendix A for a complete list of AAAA's "ARNG Aviation Unit of the Year Recipients," 1969-2008.)

## Creation of the ARNG Aviation Division

The massive expansion of ARNG aviation brought with it the realization that existing staff offices at NGB were inadequate to manage the size and complexity of the force. In the late 1940s, a single rated pilot at NGB had originally been responsible for the organization of the aviation program. Over time, two staff sections developed: a small aviation branch in the ARNG Operations and Training Division (NGB-ARO) and a comparable logistics branch in the ARNG Logistics Division (NGB-ARL). In the states, a similar evolution had taken place with aviation staff sections developing under the leadership of a state Army aviation officer (SAAO) who was usually assigned to the Plans, Operations and Training Office in the state headquarters.

By 1970, it was clear that a new and larger staff entity was needed to provide national oversight of aviation's rapidly expanding supply and maintenance functions. However, public laws related to the creation of the Army General Staff had placed caps on the number of staff officers assigned within the Military District of Washington. Since 1908, adherence to these laws had limited the size of NGB as part of the Army Staff. To allow the creation of a new ARNG aviation logistics staff, while still meeting legal manning constraints, NGB looked to form an operating activity center (OAC) outside of the nation's capital.

A search soon began for a suitable location in nearby Maryland or Virginia. The site chosen

# Mr. John J. Stanko, Jr.

John Stanko addresses the 1983 AAAA Convention upon the occasion of his induction into the Army Aviation Hall of Fame.

No one has been more responsible for the development of ARNG aviation than John J. Stanko, Jr. Because of his nearly forty years of service to the Guard aviation community, he is rightly known as the "Father of ARNG Aviation."

Born in 1922 in Scranton, Pennsylvania, he survived the rigors of the Great Depression as a young man by driving a taxicab, running a hamburger stand and eventually working in an office for General Electric. During World War II, he served in the Army Air Forces in Europe as a B-24 bomber pilot, flying twelve combat missions. At war's end, he over flew Nazi prison camps, dropping relief supplies from low altitude to Allied prisoners of war.

After the war, John Stanko took up residence in Danville, Pennsylvania, and joined the Air Force Reserve. He became a light aircraft pilot in the Pennsylvania ARNG in 1954, and since the day he volunteered, John Stanko loved serving in the Guard. In the following decade, he became a qualified armor officer, commanding the 104th Aviation Company in Lancaster. In May 1966, forty-four-year-old Major Stanko reported to NGB in the Pentagon for a four year tour as an aviation staff officer. In 1972 he was recalled to serve at NGB as the head of the new Aviation Logistics Center with the civilian rank of GS-14 military technician. Five years later, he became Chief, ARNG Aviation Division, a position he held for sixteen years. During his tenure, he was most satisfied with his role in the creation of ARNG aviation logistics, maintenance, and training organizations and infrastructure. His proudest moment came in 1990 when Guard pilots achieved a "zero" percent accident rate, an unheard of accomplishment. By the time of his retirement in 1993, ARNG aviation was arguably the largest, separate military aviation force in the world, consisting of 2,800 helicopters, 150 fixed wing aircraft, and 6,800 aviators.

All who worked with him recognized John Stanko as an innovative and dedicated leader whose enthusiasm was infectious. When the occasional vexing problem arose, his persistence and commanding knowledge led to a suitable solution. He was loyal to his subordinates and inspired the same in return. To those who knew him best, John Stanko was a welcoming father figure. He was also respected for his considerable airmanship skills in a number of fixed wing and rotary wing aircraft. In recognition of his many accomplishments, John Stanko was inducted into the Army Aviation Hall of Fame in 1983.

Building 4430 at the Edgewood Area of Aberdeen Proving Ground, Maryland, served as the first home of the ARNG Aviation Division starting in the early 1970s. NGB-AVN personnel operated from this building for nearly a decade. *Michael Doubler*

was the Edgewood Area of Aberdeen Proving Ground, Maryland, located some sixty miles northeast of Washington, DC. Aberdeen and Edgewood had opened in 1917 as ordnance and artillery testing areas, and over the decades, had become involved in the production, testing and storage of chemical weapons. A two-story World War II era office building was available in the main cantonment area at Edgewood that would be suitable for housing a new ARNG aviation staff section. Edgewood Area was also unique in that it was located outside of the Military District of Washington but still afforded staff personnel reasonable access to NGB and the Pentagon.[18]

The search for a suitable site took place concurrently with the hiring of personnel for the new Aviation Logistics Center. The first person hired was Lt. Col. John J. Stanko, Jr., from Pennsylvania who had previously completed a tour at NGB as a staff officer. Lt. Gen. LaVern E. Weber, the CNGB at the time, was the driving force behind the creation of the new logistics office. General Weber had been impressed with Lieutenant Colonel Stanko's performance at NGB and favored him to head the new center. In 1972, John Stanko set up shop in Building 4430 at Edgewood and began hiring others. The second employee was Maj. Al Marshal of Maryland who was selected from among 400 applicants. Though not an aviator, Marshal was a talented logistician. Additional hiring soon took place, with the Edgewood location heavily influencing staff appointments. Twelve civilian and military members were from Maryland, with the entire staff organized as a detachment of Maryland's National Guard state headquarters.[19]

The Aviation Logistics Center soon set about to perform the gargantuan task of organizing and operating a coherent aviation logistics program. High OR rates were proof positive of their success. Before long, discussions were held toward creating an entirely new staff division at NGB to better manage the aviation force. At the time, NGB-ARL retained technical control of the Edgewood group. Not everyone was comfortable with the creation of a separate staff division oriented exclusively on ARNG aviation, though the Army had already formed an Aviation Support Command. Forty years earlier, the Air Force had argued against the hazards of creating Army aviation as an added, separate flying force within the Army. Now in the early 1970s, Guardsmen used a very similar argument against the creation of an Aviation Division as a new staff within NGB. The belief persisted that a separate Aviation Division was unnecessary and redundant. A popular line of thought was: Why couldn't aviators manage their force with staff branches in established NGB staff divisions, just like the other combat arms?[20]

However, the unique demands of manning, training, equipping and sustaining a rapidly expanding and evolving aviation force soon carried the day. The new ARNG Aviation Division was organized in 1974 and stationed at Edgewood. In its original form, the division consisted of a headquarters office and four operating elements: the Standards and Training Branch; the Certification Branch; the Multi-Media Group; and the Aviation Logistics Center. A unique aspect of the division's composition was that the Multi-Media Group was stationed at Fort Rucker, where it performed the mission of providing multimedia instructional programs to all of ARNG aviation.[21]

Not long after its inception, John Stanko became the head of the Aviation Division, with

Al Marshal becoming the deputy head. As the division chief, Mr. Stanko managed a staff of over forty personnel: a mix of Active Guard and Reserve (AGR) tour program officers and Department of the Army civilian employees. A dedicated and visionary leader with the highest of standards, Mr. Stanko described his organizational method as follows:

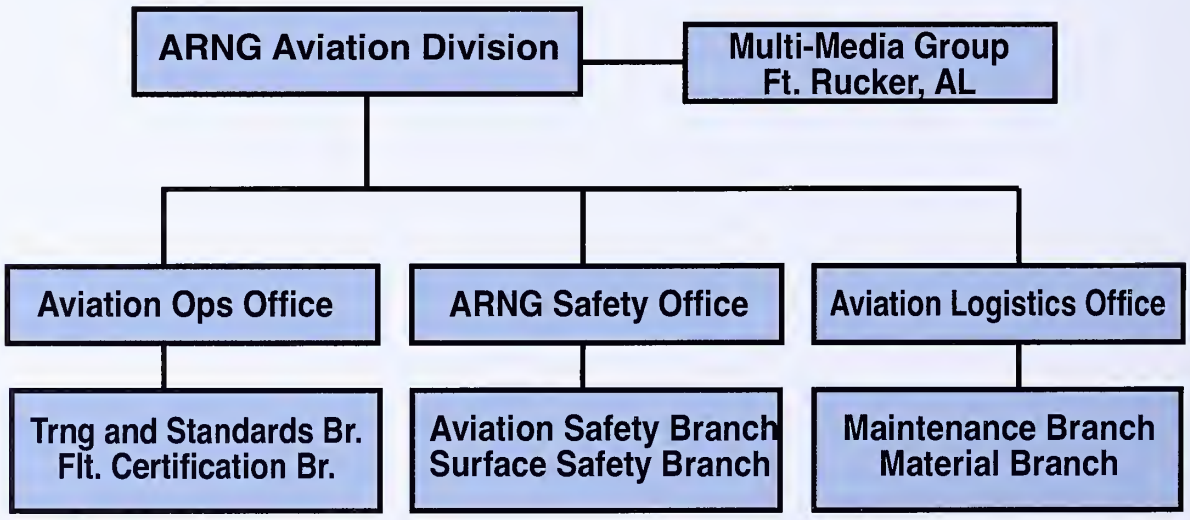
> The style of management that we use is repeated from branch to branch, program to program. Each branch is assigned its mission which in broad terms points the way. Simultaneously they are provided an interface chart which actually assigns their parameters. Then they must provide report cards in a regular sequence which annotate the progress toward established standards, which in all cases are the same as those prescribed for active Army aviation units and aviation personnel.[22]

John Stanko believed that Guard aviators were second to none and was tireless in his work and the promotion of ARNG aviation. His enthusiasm extended to the entire Army aviation community. For nearly twenty years, he remained the singular head of the Aviation Division, earning for him entry into the Army Aviation Hall of Fame and a well-deserved reputation as the "Father of ARNG Aviation."

A reorganization in 1976 provided more intensive management for significant functions peculiar to aviation. In its new form, the Aviation Division included a Headquarters Office, an Operations Office, a Safety Office and a Logistics Office, each with two subordinate branches. (See Table 2.) The Multi-Media Group at Rucker remained in its existing configuration. A major part of the reorganization was that the entire ARNG Safety Program became the responsibility of the Aviation Division.[23]

One example of the Aviation Division's effectiveness in management in its early years is found in the accomplishments of the Safety Office. In 1974, the ARNG had suffered eighteen major aircraft accidents. The Safety Office undertook a concerted effort to get this number down as soon as possible. The new goal was to reduce manpower, equipment and monetary losses through mishap prevention with the ultimate objective of achieving a "zero" Class A accident rate year in the near future. The Safety Office raised awareness by integrating safety provisions into written regulations and NGB directives. Programs were established to train and assign safety experts in all of the states and territories. Just as important, monies were made available to

**TABLE 2. ARNG AVIATION DIVISION, 1976**



The Pennsylvania delegation at an AAAA annual convention in the early 1980s. John Stanko stands in the top row, third from left. Several future leaders in ARNG aviation are in attendance. Jessica Wright (second row, fifth from left) would serve on the initial staff at the new EAATS and rise to prominence as an ARNG aviation leader and general officer. Col. Bill Badger (front row, second from left) would become the first commander of both the EAATS and the WAATS. *Pennsylvania National Guard*

buy safety equipment, and awards programs were established to recognize units for the attainment of safety goals.[24]

A year later, the accident rate fell dramatically; a total of only nine major accidents were reported in 1975, a reduction of 50 percent. Even more importantly, no serious injuries or fatalities occurred. In 1976, only six major accidents took place, giving the ARNG an accident flying rate of only 2.78 per 100,000 hours flown, the lowest accident rate ever recorded in the ARNG. Not only was it the lowest aviation accident rate among the Army's three components that year, but it was also the lowest among all of the armed forces. It took more than a decade, but ARNG aviation finally achieved the goal of a "zero" Class A accident rate in 1990.[25]

## New Aviation Missions

The first strategic priority for the U.S. military following the Vietnam War was to identify new missions. After examining the nation's most likely security threats, the Army concluded that a mechanized war in Europe and a light infantry war elsewhere were the two most probable challenges. Of the two, a major war against the Soviets represented the greatest challenge to national security. Starting in the early 1970s, the Army focused on the defense of Europe as its foremost mission.

New doctrine outlined the concepts for defending NATO. The Army's challenge was to fight and win the first battle of the next war by employing aggressive, defensive tactics that destroyed the enemy with maneuver and firepower. Facing vastly superior numbers, Americans were expected "to fight outnumbered and win." In order to have enough troops available, the Army would have to mobilize the reserve components faster than in any previous war. ARNG units were expected to go into battle with minimum preparations, employing new, more lethal, and complex weapons than ever before as part of sophisticated combined arms operations.

Citizen-soldiers from Hawaii's Company A, 299th Infantry fan out after being dropped off by a UH-1D Huey helicopter, also from the Hawaii Guard, during a staged media event in the 1970s. The National Guard logo of that time is painted on the pilot's door. *National Guard Educational Foundation*

Army aviation was to be in the very center of the fight. Attack helicopters would conduct deep strike missions behind enemy lines and assist ground forces in stubbornly defending their positions. Missions would be flown day or night while traversing all types of terrain and under all weather conditions. Attack helicopters, with their long range, wire-guided missiles and potent Gatling guns, were expected to wreak havoc on Soviet armored and mechanized units. Aviation advocates argued that helicopter units maneuvered rather than flew and were capable of seizing and holding terrain, just like infantry and armor units. However, detractors remained skeptical of the survivability of rotary wing aircraft that were susceptible to ground fire. Army aviators countered the potential dangers by developing tactics such as nap of the earth (NOE) flying, adverse weather flying, and techniques that allowed helicopters to take advantage of folds and obstructions in the terrain to provide stealth and protection.

Gunners of Virginia's 111th Field Artillery load their 105mm howitzer into a Chinook from Pennsylvania's 228th Aviation Company during annual training at Fort Pickett, Virginia, in 1978. *Virginia National Guard Historical Collection*

As an integral part of Army aviation, ARNG flyers had to master a whole new set of skills and tactics that would allow them to fight and survive in high-intensity combat. The first requirement the Army levied upon the ARNG was to instrument qualify all pilots by the end of 1975. A lack of instructor pilots (IP) initially slowed the program. By the end of 1975, a total of 78 percent of pilots were qualified. Within two years, 82 percent of the total number of authorized aviators and 95 percent of pilots on flight status were instrument rated.[26]

Another significant challenge was the mastery of NOE flying, an inherently hazardous

All aviators have to pass more extensive flight physicals than the routine physicals given all Army troops. Their vision must be uncorrected 20-20 and their hearing, which is the test being given here, must be almost perfect. *Army Aviation Museum*

undertaking. The ARNG announced the beginning of its NOE program in 1974 with the aim of giving units and pilots the skills necessary to maneuver aircraft and increase survivability in a high threat, air defense environment. States developed specific low-level, contour routes to challenge aviators' skills while imparting the techniques of NOE flight. A shortage of NOE IPs and approved training routes at first slowed progress; by the end of 1976 only 40 percent of Guard aviators were qualified. Both problems were soon resolved, and by the end of the following year, 74 percent of the pilots were NOE qualified. One of the most remarkable aspects of NOE training was that no major accidents were reported, despite the high risk involved.[27]

For the first time, aerial gunnery became an integral part of ARNG aviation training regimes. Varied models of the UH-1 arrived in the states that carried heavy, automatic weapons, aerial rockets and wire guided missiles mounted on outboard pylons. Many Vietnam veterans had used such gunships before, but still they had to learn new firing and fighting techniques. The high threat from enemy air defenses expected in a European war rendered obsolescent the helicopter gunship tactics used in Southeast Asia. High-altitude strafing runs and diving attacks were discontinued. Instead, ARNG gunship crews learned the techniques of low terrain flying, target acquisition at low altitude, and the engagement of targets from concealed positions that offered protection and long-distance stand-off to avoid detection. The tactics that UH-1 gunships employed were a precursor to the ARNG's debut of the attack helicopter, which followed only a few years later.[28]

The ammunition load for a UH-1B Huey gunship. The armament includes two, seven-round rocket pods plus twin M-60 machine guns on each side. The co-pilot was usually the gunner as well. The ARNG started flying UH-1Bs in the mid-1970s as gun escorts for troop bearing UH-1Ds, which were unarmed. *Army Aviation Museum*

The possibility of a major war breaking out with only short notice placed new emphasis on the combat readiness of entire aviation units, a paradigm shift that forever vanquished ARNG aviation's reputation in some circles as a "cow pasture" flying force. While the maintenance of individual flying proficiency remained the cornerstone of the Guard's aviation program, unit collective training now became a close second. Starting in the mid-1970s, the Army Training and Evaluation Program (ARTEP) was introduced that prescribed "tasks, conditions and standards" for each type of combat mission units were expected to perform. During AT and other training periods, units were evaluated—some said tested—based on ARTEP standards. In the states, aviation commanders focused their training periods on unit ARTEP standards as the best means of accomplishing training objectives and achieving desired readiness levels.[29]

ARTEP standards introduced Guard aviators to a new and demanding task: night unit operations. The same emphasis that was always placed on tactical operations in daylight was expanded to include night operations. While qualified ARNG aviators had always flown at night, most had little experience or had never operated together as a unit during reduced hours of visibility. The first phase of training consisted

ARNG pilots began training with night vision goggles in the late 1970s as they prepared themselves for a possible war in Europe against the Soviets. *Army Aviation Museum*

of a series of individual qualification requirements and unit integration exercises conducted in daylight. Afterwards, formations of helicopters took to the sky at night. For the first time, ARNG pilots and crewmen had to master the challenging task of flying using night vision goggles (NVG). In addition, it was during this time that the look of ARNG aviators changed dramatically. The wear of olive drab flight helmets, safety boots, and protective gloves and clothing first introduced in Vietnam became widespread throughout the Guard.[30]

While the 1970s were an exciting and historic decade for ARNG aviation, the rapid expansion of the force and the inception of new missions posed significant, new challenges. In only thirty-nine unit training days a year, commanders had to prepare units to fight on short notice, using weapons and technology that was becoming more and more sophisticated. The Cold War eliminated the luxury of long post-mobilization training periods that had been possible in previous conflicts. As a result, aviation units had to prepare for a "come as you are" war in Europe and elsewhere. While the receipt of new aircraft and equipment was always exciting, aviation units

An aerial image of an AASF in Utah in 1975. The aircraft bonanza resulting from the end of the Vietnam War is apparent here, with four types of fixed and rotary wing aircraft crowded onto the tarmac at one time. *Utah National Guard*

faced the specter of unit unreadiness for several years as personnel completed new equipment or job reclassification training. In many cases, citizen-aviators did not have access to facilities, simulators and expanded training areas that existed only on active duty installations. All of these factors continued to inhibit the full development of the ARNG aviation program as the 1980s began.[31]

## Creation of Aviation Branch

By 1980 ARNG aviation had grown large enough to constitute approximately one-third of the Army's entire aviation assets. The Guard's force structure alone included 156 organized units and another 61 non-deployable support organizations. Not only was ARNG aviation large, but it was also cost-effective and efficient. For a total of $39.6 million, only 12.3 percent of the total Army flying hour program, the ARNG maintained proficiency for over 4,500 aviators.[32]

The rapid rise in the size and significance of ARNG aviation mirrored the trends taking place in Army aviation. Based on the legacy of Vietnam and ongoing tests and experimentation, aviation advocates had convinced the senior Army leadership that helicopters could not only survive in a high threat environment but help defeat Soviet-style mechanized forces. The concept for an Air Cavalry Combat Brigade was developed at Fort Rucker and tested at Fort Lewis, Washington. New technology, such as NVGs, flight simulators, and advanced lasers and communications systems held the promise for even greater roles for aviation. Hopes were high for the fielding of the AH-64 Apache, whose combination of armaments would make it possibly the most lethal helicopter gunship in the world.[33]

A UH-1 Huey gunship on the tarmac at Muir Army Air Field, Fort Indiantown Gap, Pennsylvania, in the late 1970s. Muir's high control tower stands in the background. The ARNG run air field would become the third busiest airport in Pennsylvania, behind only Philadelphia and Pittsburgh, because of the traffic generated by the EAATS, resident aviation commands, and other ARNG aviation units on annual training. *Pennsylvania National Guard*

Members of Iowa's 1105th Aviation Company refuel their Chinook after delivering soldiers from Minnesota's 1st Brigade, 47th Infantry Division, to an exercise at Camp Ripley, Minnesota, in 1973. *National Guard Educational Foundation*

The aspirations of the Army aviation community reached their fulfillment with the establishment of aviation as a new, independent combat arm. On April 12, 1983, Secretary of the Army John O. Marsh, Jr., himself a proud Virginia Guard veteran, approved the action. The actual date of the branch's implementation—June 6, 1983—was well chosen: it marked the forty-first anniversary of the founding of Army light aviation during World War II. A new branch insignia, coin, and motto soon appeared. The following year, Fort Rucker began Basic and Advanced Courses for officers and warrant officers and Advanced Individual Training for enlisted personnel.[34]

The creation of Aviation Branch had only a limited affect on the ARNG. The Guard had already developed systems for managing, training and maintaining its aviation force that were free from any other branch affiliation. The real difference came in the professional development and personnel management of officers and warrant officers who served in aviation leadership positions. The ARNG had been limited in such leadership because unit commanders came from other branches. Officers often felt as though they had two bosses because of their branch affiliations and were reluctant to make career decisions that favored aviation over their primary branch. Prior to 1983, members of the World War II "Cub Club" and Vietnam veterans had provided much of the leadership in ARNG aviation. The creation of Aviation Branch helped to pave the way for a new generation of leaders with a single-minded dedication to aviation and more extensive experience in their own branch.[35]

The military often uses static equipment displays for recruiting purposes and to show the public how its tax money is being spent. With the adoption of the all-volunteer force, ARNG recruiting and good public relations grew in importance in the 1970s. An ARNG Huey crew member explains to visitors how the helicopter works. *National Guard Educational Foundation*

## Newer Aircraft in the 1980s

With the election of President Reagan, the U.S. military once again enjoyed widespread public support and increased resources for modernization and training, programs that became known as the Reagan Buildup. For Army aviation, the most overt signs of the buildup were the fieldings of the UH-60 Black Hawk and the AH-64 Apache and a wider distribution of the CH-47 Chinook. Modernization allowed the cascading of newer, more capable helicopters to the ARNG to replace an aging fleet of aircraft from the 1950s and 1960s.

ARNG aviation achieved an important milestone with the receipt of its first attack helicopter, the AH-1 Cobra. The first seven

aircraft fielded were TH-1G models in 1979. The following year, the Utah ARNG received six AH-1Gs. The unit of assignment was the Attack Helicopter Troop assigned to Montana's 163rd ACR. A large, brand-new AASF at the Salt Lake City airport and the availability of outstanding training areas at Camp William G. Williams, Dugway Proving Ground, and the Utah Test and Training Range provided a favorable environment for the fielding of the Guard's first Cobra equipped attack helicopter unit.[36]

With the promise of more AH-1s on the way, states designated to receive the Cobra worked with the Aviation Division to develop viable fielding plans and schedules. Crewmen and maintainers traveled to Fort Rucker for formal training while the receiving states conducted unit-level qualification training using instructional materials developed at Edgewood, Maryland. As Cobras arrived, formal new equipment training programs were conducted in the states.[37]

Despite a strong start, the AH-1 program moved forward in fits and starts. The ARNG was authorized a total of 496 AH-1S model aircraft, substituting the aged UH-1M Huey gunship for the AH-1 until the newer aircraft arrived. (The model AH-1S Cobra was armed with the advanced and lethal TOW missile system.) By the mid-1980s, the ARNG had received 159 Cobras, less than one-third of the total number authorized. Attack helicopter units clung to their Huey gunships, though by this time NGB had declared the UH-1M an "unsatisfactory weapons system for employment on the modern battlefield." By the end of the decade, the news got even worse; the Army decided to purge all AH-1s from active duty and not assign any more to the Guard. As a result, the ARNG was forced to retain aging Huey gunships for much longer than anyone anticipated. At the end of the 1980s, 101 UH-1Ms were still in the inventory, assigned to three attack helicopter battalions and seven air cavalry troops nationwide.[38]

The debut of the attack helicopter had serious and profound implications for ARNG aviation. While cargo and utility helicopters played

## AH-1 Cobra

The AH-1G Cobra was developed during the Vietnam War as the Army's first true attack helicopter, gradually replacing the UH-1B armed Huey. With a crew of two, these ships carried two 7.62 multi-barreled miniguns and two M129 40mm grenade launchers (or one of each system in an M128 turret housed under the nose). Later versions were equipped with M260/M261 pods capable of housing seven or nineteen rockets suspended under each wing.

The Cobra was powered by the Avco Lycoming T53-13 turbo-shaft engine capable of producing 1,400 hp. It had a maximum speed of 219 mph and a range of 352 miles. Its operational ceiling was 11,400 feet. The Cobra saw extensive service in Vietnam, serving as an attack platform and pioneering new tactics in the aerial attack of enemy armored vehicles and fixed defensive positions.

Starting in 1975 the Army began upgrading the Cobra, designated as the S model. These had more powerful Lycoming T53-703 engines producing up to 1,800 hp. Though having more horsepower, the S model only had a maximum speed of 172 mph and a range of 315 miles due to its heavier armament. However, its operational ceiling increased to 12,200 feet. The AH-1S was armed with the M65 TOW missile system, suspended in four or eight two-missile launchers under each wing. They were also armed with the M197 three-barreled, 20mm Gatling gun housed under the nose.

Utah's Attack Helicopter Troop, 163rd ACR was the first ARNG unit to receive the AH-1 in 1980. Afterwards, the new AH-64A Apache replaced aging AH-1s in ARNG attack helicopter battalions. The ARNG's last AH-1S Cobras were retired in September 2001.

A formation of UH-60A Black Hawks of Kentucky's 1155th Transportation Company soon after they entered Guard service in 1983. *National Guard Bureau*

an important, supporting role on the battlefield, the attack helicopter was expected to fight and win in direct combat. The activation of attack helicopter units in the ARNG placed even more pressure on citizen-soldier aviators to perform at peak proficiency. The demanding combination of terrain flying, target acquisition at low altitudes, and target destruction from concealed or standoff positions made the training of attack helicopter crews one of the most difficult tasks ever undertaken by ARNG aviators. The same could be said for the maintenance and repair of the complex avionics, targeting and weapons systems the Cobra carried. In many ways, the success of the ARNG's AH-1 program became a litmus test for the ability of Guard aviators to train and perform alongside Regular Army flyers on the modern battlefield.[39]

The UH-60 Black Hawk first appeared in the ARNG in 1983. Unfortunately, the fielding of the Black Hawk was even slower and more deliberate than that of the Cobra. By 1986 only twenty-two Black Hawks had been fielded to high priority aviation units in Alaska, Kentucky, Oklahoma and Virginia. Three years later, only sixty-seven UH-60s were in the ARNG fleet, against an authorized requirement of nearly 800. Sudden talk of massive cuts in defense spending prompted by the fall of the Berlin Wall in November 1989 sent shivers through ARNG aviation. The fear was that cuts in defense spending might cause a further decrease in the rate of Black Hawk distribution. The thought quickly emerged that Congressional action might be needed to save the ARNG's fledgling UH-60 program.[40]

If ARNG aviators were already feeling nervous, their anxiety was certainly fueled by the rapid aging of their aircraft, most of which were

The U-8 Ute was among the new, twin-engined aircraft that entered Guard service in the 1970s. The U-8 was the military version of the Beechcraft Queen Air, serving as a primary liaison and utility fixed wing aircraft for the Army and the ARNG. *National Guard Educational Foundation*

from the Vietnam era or earlier. By 1987, some older models were achieving an abysmal OR rate of only 62 percent. Meanwhile the Army maintained that the acceptable OR rate for such aircraft was 75 percent. Try as they might, mechanics worked to perform phased maintenance and to prepare units for major missions, but they were unable to overcome the acute, multiple problems of aging airframes. Common deficiencies included safety of flight groundings and materiel shortages from main rotor hubs, tail boom assemblies, rotor blades, and grip materiel. Out of necessity, the ARNG went directly to Sikorsky to contract for the supply and maintenance support of its small fleet of aging CH-54 Skycranes.[41]

In terms of fixed wing aircraft, a major milestone in the 1980s was the debut of the twin-engine C-12 Huron. In 1983 the ARNG received an initial issue of six C-12s, with another six delivered the following year. From the start, the C-12 established a reputation as the workhorse of administrative support aircraft. To comply with Army utilization plans, the aircraft were to operate in a regional support manner, flying a minimum of 600 mission hours annually. Regional flights were those conducted outside of local flying areas or beyond the boundary of the state to which the aircraft was assigned. Two full-time AGR pilots were authorized for each aircraft. In their first year of operation, C-12s flew a total of 2,581 hours, including 460 missions that provided transportation support to NGB and thirty-four states.[42]

As a rule, the ARNG has always preferred not to create unique units or to operate equipment peculiar to the Guard. However, exceptions to the rule arose from time to time in aviation. By the middle of the 1980s, the CH-54, UH-1M, and OH-6 were aircraft exclusive to the ARNG because of their age. In other cases, distinctive operational conditions required the use of specific aircraft types. No flying environment in the nation was perhaps more hazardous than Alaska's mountains and wilds. There ARNG aviation supported the 207th Scout Group, specializing in

## C-12 Huron

The C-12 Huron, a twin turboprop passenger and cargo aircraft, is the military version of the Beechcraft Super King Air. The U.S. Army ordered sixty passenger-carrying C-12As in 1973. Worldwide deployment began in July 1975, with a total of 380 ordered by the U.S. armed forces by the late 1990s.

The C-12 aircraft, manufactured by Raytheon Aircraft Company (formerly Beech Aircraft Corporation), is a high-performance, T-tail, pressurized, monoplane that accommodates places for a pilot, co-pilot and passengers. The aircraft is powered by two Pratt and Whitney PT6A-41/42/65 turboprop engines. The aircraft provides operational support for military bases and other sites as well as fleet and shore units.

The C-12 first entered ARNG service in 1983 and become a favorite in the operational support aircraft fleet. The site of C-12s operating from AASFs became common throughout the Army Guard, especially in the form of executive air transport for senior personnel. The C-12's comfort and speed allowed for the efficient movement of passengers at considerable cost savings to the government.

When the Operational Support Airlift Agency (OSAA) was created in 1992, and then passed to the National Guard for command and control the following year, the C-12 remained a mainstay of the aircraft fleet. OSAA soon began the retirement of non-standard aircraft (T-42, U-8, U-21), and started the modernization of the remaining fleet of C-12, C-20, C-21 and C-26 airplanes. Army aviation's overall goal relative to the fixed wing fleet is to reduce the current number of aircraft models to only four, including procurement of a new C-XX Short Range (SR) to perform missions currently performed by older aircraft. For as long as it remains in the air, the C-12 will remain an integral part of OSAA operations.

arctic reconnaissance. Alaska used the UV-18, the only DeHavilland Twin Otters in the Army inventory, to support its mission. At the same time, several fixed wing units continued to operate the CV-2 Caribou, an older, reliable cargo and troop hauler that the Air Force and the Army had abandoned years earlier.[43]

## ARNG Aviation Roundout Units

The Army's primary initiative for implementing the Total Force Policy with the ARNG was the Roundout Program, which permanently assigned selected Army Guard units to active duty organizations. The heart of the Roundout Program was the assignment of ARNG combat brigades to active duty divisions as an integral part of their organization. In peacetime, certain army divisions had only two brigades, and upon mobilization, a third ARNG Roundout brigade would bring the division to full strength. The initial Roundout brigade was designated in 1973, with several others entering the program in the following years. In the Army's mind, linking citizen-soldier Roundout brigades to active divisions ensured that the Army would never again go to war without the full support of the American people, as had happened in Vietnam. For the ARNG, the Roundout Program afforded citizen-soldiers better opportunities for training and the receipt of more modern weapons and equipment.

Eventually the Army expanded the Roundout program to include a number of ARNG aviation units. North Carolina's 1st Battalion, 130th Aviation was designated as an attack helicopter Roundout battalion to the XVIII Airborne Corps at Fort Bragg. With prodding from Congress, the Army agreed to field the AH-64 Apache to the 1-130th, making it the first Apache battalion in the ARNG. The Apache fielding became a closely scrutinized event, just as the fielding of the AH-1 had been years earlier. Those who questioned the abilities of ARNG aviators waited to see if they were capable of mastering the Apache and performing on an equal basis with active duty flyers.

The fielding of the AH-64 was a major test for ARNG aviation, measuring the ability of citizen-soldier aviators to master complex combat tasks. The ARNG senior leadership was determined that the first Apache fieldings would succeed. *National Guard Educational Foundation.*

The 1-130th commenced AH-64 training in the summer of 1986. The Apache fielding included a rigorous two-year training regime. The first phase consisted of a ninety-day training period at Fort Hood, Texas, for the battalion's IPs, selected cadre, and other key personnel. Afterwards, the 1-130th received its Apaches and began a twelve-month training period at home station which focused on individual and company-level training. Once the second phase ended, the 1-130th deployed as an entire unit back to Fort Hood to undergo a thirty-day ARTEP and combat readiness certification. At the completion of exercises on August 8, 1988, Army evaluators gave the North Carolinians top ratings for readiness in personnel and equipment.[44]

The 1-130th's success had broad implications for ARNG aviation. The Apache's debut brought increased visibility to the entire aviation program.

By mastering the Apache, Guard aviators vastly enhanced their credibility with Regular Army flyers, proving they could perform on an equal basis. In recognition of their achievement, AAAA selected the 1-130th as the ARNG Aviation Unit of the Year in 1988. Before long, the Army approved plans for the equipping of eleven more ARNG Apache battalions by the end of 1995. Lessons learned from North Carolina's experience were incorporated into plans for the next round of fieldings. Starting in 1987, two more attack battalions—the 1-151st Aviation in South Carolina and Florida's 1-111th Aviation—began Apache transition training. Eventually, Apache fielding periods expanded into three-year programs.[45]

One of the ARNG's most unique Roundout units was Oklahoma's 1st Battalion, 245th Aviation Regiment. In the aftermath of the failed Iranian hostage rescue effort in 1980, the Army decided to provide its own helicopter support to Army special forces (SF). In 1981 the 160th Special Operations Aviation Regiment (SOAR), known universally as the "Night Stalkers," was formed. To provide the 160th added lift capabilities, the Army assigned the 1-245th as a Roundout unit starting in 1982.[46]

During its time as an SF Roundout, the 1-245th flew the OH-6, the UH-1H and the UH-60A. To assist the 160th SOAR, the 1-245th trained earnestly for its main mission: to fly low-level missions at night under NVGs in order to hit designated targets and landing zones at precise times. For this reason, the battalion earned the nickname, the "Lords of Darkness." The high number of experienced aviators in the unit easily mastered the challenges of NVG flying during training exercises in Arizona and Oklahoma. The dedication of the unit's members belied the notion of the ARNG as a part-time force; many flight crews spent up to four months each year on active duty. On average, the battalion participated in fifteen exercises annually while still conducting twelve weekend drills per year.[47]

From its headquarters at Oklahoma's AASF #2 located next to the Tulsa International Airport, the 1-245th supported SF operations worldwide. Deployments carried citizen-soldier aviators to Australia, Bangladesh, Honduras, Indonesia and Thailand. In CONUS the Lords of Darkness supported ARNG and USAR SF Groups, including training rotations at the Joint Readiness Training Center (JRTC). The typical mission included flying long trips to insert special operators at night into precise locations and to extract them when needed. Like most ARNG aviation units, the 1-245th provided occasional support to law enforcement in Oklahoma and humanitarian relief assistance following natural disasters. In 1994 the 1-245th was inactivated, but the Oklahomans retained pride in a job well done. "They carried a lot of water for us," said Col. Bryan D. Brown, the 160th SOAR commander at the time of the inactivation. "They had unbelievable skills."[48]

The Roundout concept also affected ARNG aviation maintenance. As part of their planning for a major war in Europe, Army logisticians in 1977 undertook an examination of the affects of a

In June 1984, a CH-57 Skycrane from Detachment 1, 137th Transportation Company, Nevada ARNG, carefully delivers a camera dome atop a communications tower on Tiefort Mountain at Fort Irwin, California. The camera would be used for tracking troop movements for instructional purposes during exercises at the National Training Center. *National Guard Educational Foundation*

major conflict on aviation depot capabilities. The study concluded that a substantial conflict would likely generate an enormous workload that would overwhelm aviation depots in CONUS. Deploying aviation forces would also require depot-level support that might simply be unavailable. In addition, the Army desired an added aviation depot maintenance capacity in the expected theater of war.[49]

To solve the depot maintenance problem, the Army turned to the Guard, again employing the Roundout concept. In 1979 the four ARNG TARS were converted to Aviation Classification Repair Activity Depots (AVCRAD). As such, the AVCRADs were placed in the Army's Aviation Depot Maintenance Roundout Units (ADMRU) program, a concerted effort to ensure that aviation maintenance depots could provide continuous aviation support in both peace and war. With the Army's approval, ARNG aviation created a mobilization AVCRAD control element (MACE) to serve as a headquarters for the AVCRADs in wartime. Al Marshal of the ARNG Aviation Division was selected to serve as the first MACE commander in his capacity as a traditional Guardsman with the rank of colonel in the Maryland ARNG.[50]

Maintenance facilities are a bedrock of the ARNG aviation program. The shop floor of Pennsylvania's AASF #1 at Fort Indiantown Gap as it appeared in 1982. *Pennsylvania National Guard*

For the first time, the ARNG's premier aviation repair units had a wartime mission. As Roundouts, the four AVCRADs became part of the Army Materiel Command upon mobilization. In the early stages of mobilization, they were to provide additional, intermediate-level maintenance support and selected depot-level support to deploying units and combat forces overseas. On order, the AVCRADs were to send tailored maintenance and repair teams to designated facilities. As mobilization progressed and war commenced, the AVCRADs were to aid CONUS aviation maintenance depots with the repair of damaged aircraft and equipment.[51]

The AVCRADs took on several new peacetime missions as well during the 1980s. Mississippi's AVCRAD became the designated rebuild and overhaul facility for the ARNG's OH-6 fleet and for all other federal agencies using the aircraft. Missouri's AVCRAD manufactured special tools for use on the UH-60, and the Connecticut AVCRAD gained the C-7 Caribou training mission. All AVCRADs became involved in repair and rebuild programs for the AH-1S, ensuring that Cobras were in top condition before they were issued to the states.[52]

The creation of an overseas AVCRAD was one of the great maintenance innovations of the period. The Army determined that an additional AVCRAD was needed to augment its repair capabilities in Europe. Located in Brussels, Belgium, the European AVCRAD sat astride the U.S. Army logistical pipeline running from West Germany to CONUS. The first commander of the European AVCRAD was Lt. Col. Eric Braman, who eventually became one of the ARNG's most senior leaders as the director of the ARNG Operations Directorate in the 1990s. Responsibility for manning the organization fell to Missouri's 1107th AVCRAD, which sent personnel to Belgium for training on a regular basis. Over time, contract supervisors and maintenance personnel provided a full-time work force cadre. In addition to its wartime mission, the European AVCRAD was a peacetime asset. It provided contact teams to airports and seaports in

# Brig. Gen. Robert G. "Toobee" Johnson

During an ARNG aviation career that spanned nearly thirty-five years, Robert G. "Toobee" Johnson served as the quarterback of Mississippi's aviation maintenance team and became an organizer and a backbone of the national AVCRAD program. As the commander of Mississippi's 1108th AVCRAD, General Johnson became the longest serving AVCRAD commander in ARNG aviation history.

Born in Raleigh, Mississippi, Robert Johnson developed a desire to fly as a young man, inspired by the stories of relatives who had flown combat aircraft during World War II. As a high school football halfback, the number-letter combination "2B" identified his favorite play. A moniker for him based on the play soon morphed into the nickname "Toobee." He joined the Mississippi National Guard in June 1960. Within a year, he had gained a position as a full-time unit administrative supply technician in the 213th Medical Battalion. In 1966 Toobee Johnson attended OCS at Fort Benning, and after receiving his commission in the infantry, he became a training officer in the 213th.

In 1968 Mississippi organized the 131st Aviation, the state's first battalion-sized aviation unit. Toobee soon transferred to the 131st. In 1969-1970, he attended flight training at Fort Wolters, Texas, and Fort Rucker, becoming rated in the H-13, H-23 and UH-1. Upon his return from training, he was assigned as the production controller of Detachment 1, 148th Aviation that became Mississippi's TARS unit and finally an AVCRAD. As production controller, he organized and prioritized maintenance work flows.

From 1984 to 1994, General Johnson commanded Mississippi's 1108th AVCRAD, placing special emphasis on the importance of safety, integrity and professionalism. Military aviation was inherently dangerous, he believed, and he stressed the need for safety measures on the shop floor as well as in the cockpit. Toobee insisted on strict integrity as the best way to promote honest disclosure, faithfulness and the timely identification and correction of deficiencies. His work ethic was simple; employees should put in a full day's work for a full day's pay. To promote professionalism, he implemented the apprentice-journeyman concept and enacted a strict regime of formal maintenance training. Major programs at the AVCRAD included nationwide depot-level maintenance on the OH-6 and the modification of OH-58s committed to the counter-drug effort.

General Johnson's retirement in 1994 marked the completion of one of the most distinguished careers ever in ARNG aviation. Looking back, Toobee Johnson considered his time in aviation maintenance as "the greatest honor in the world."

Europe, sent other repair teams to the field, performed routine intermediate-level maintenance, and stored and maintained Army helicopters shipped back and forth between Europe and CONUS.[53]

## New Training Capabilities and Opportunities

By the early 1980s, the surge of Vietnam veterans who had joined ARNG aviation was negatively affecting the force in two ways. First, many had successfully completed the second leg of their military flying careers and were either retiring or exiting the Guard in search of new opportunities. The loss of experienced pilots put pressure on the ARNG to recruit and train a new generation of aviators. Second, those Vietnam veterans still willing and able to fly were simply becoming older. Increased age for some occasionally hindered their ability to grasp new technologies and tactics and to mix effectively with younger aviators in the active Army and the ARNG.

Guardsmen of the 1st Battalion, 161st Infantry, riding in their M-113 armored personnel carrier, are operating with an OH-58C Kiowa of the 168th Aviation Company; both units are elements of the Washington Army Guard. They are moving toward their jumping off point during an exercise at Yakima Training Center in Washington, circa 1980. *Army Aviation Museum*

The departure of the Vietnam generation presented ARNG aviation with two new goals: to reduce the average age of the aviation force and to do so while maintaining a strength of approximately 5,000 personnel. Projections in 1980 demonstrated that without the infusion of new blood, the average maturity of the force by 1985 would be over forty years of age. To counter the trend, NGB began initiatives to recruit new pilots, to retain fresh pilots already serving in the ARNG, and to recruit younger aviation personnel leaving active duty.[54]

The OH-6 Cayuse became the ARNG's primary light observation helicopter in the 1970s. Nicknamed the "Loach," the OH-6's insect-looking cockpit, loud engine and buzzing prop wash prompted many people to say it resembled a bumble bee. *Pennsylvania National Guard*

Acquiring additional training slots at Fort Rucker proved problematic. Fort Rucker was reluctant to provide more than the ninety initial entry flight training slots allocated to the ARNG each year. Both the active force and the USAR too were experiencing aging pilot issues, and a permanent expansion of the Army training base for a temporary problem seemed impractical. The Fort Rucker school house finally agreed to provide additional slots if the ARNG furnished it with twelve additional IPs. In 1982 the Guard's annual quota rose from 90 to 140 seats, with 90 going to officers and 50 to warrants. The following year the number of IPs on loan increased to seventeen, with the promise that 224 Guard members would train in Alabama.[55]

In the Aviation Division, the best minds analyzed ARNG training capabilities and drew some important conclusions. New technologies and the receipt of modern aircraft had significantly increased mandatory, individual training requirements. At the same time, crews and units had to train as part of a combined arms team in preparation for high-intensity, mechanized warfare. The combination of these training requirements placed a heavy burden on the states. Try as it might, the Army could only provide limited training slots at Fort Rucker, and access to simulators, training areas and gunnery ranges on active duty installations remained restricted. As early as 1978, Maj. Gen. James Smith, the commander at Fort Rucker, had acknowledged the problem. As a possible fix, General Smith recommended increased ARNG participation at Rucker, the employment of mobile training teams, and the development of regional ARNG training sites.[56]

Lt. Gen. LaVern E. Weber, the CNGB, and John Stanko both concluded that ARNG aviation had become too big and complex to rely solely on the Army's generosity for its readiness. The ARNG had no choice but to develop an internal network of regional training sites to conduct individual aviation qualification training not available at Rucker, but still essential to unit readiness. As a result, workloads in the states would be reduced, allowing units additional time to concentrate on combined arms training. Col. William D. Badger, a South Dakota Guardsman serving in the Aviation Division as Chief of Operations, was given the task of developing alternatives for establishing training sites at various locations nationwide. On May 23, 1980, the Army approved the establishment of a site located in Pennsylvania and a second site at a location not yet determined in the American West.[57]

The Eastern ARNG Aviation Training Site (EAATS) was established at Fort Indiantown Gap, Pennsylvania, on August 1, 1981. Many in the aviation community surmised that John Stanko had exerted enough influence to ensure the site's placement in his native Pennsylvania. Still, Fort Indiantown Gap's centralized location along the East Coast, the presence of Pennsylvania's massive AASF #1, and easy access to training areas made the site attractive in its own right. Colonel Bill Badger had John Stanko's full trust and confidence, and because he was intimately involved in the site selection process and knew the internal workings of the ARNG Aviation Division, Badger was chosen as the first EAATS commander.[58]

By any measure, the EAATS was an outstanding success. From simple beginnings that consisted of World War II era buildings and a single UH-1 simulator, it grew rapidly into a modern facility. The growing staff of mostly Pennsylvania Active Guard and Reserve (AGR) personnel was determined to make EAATS comparable to Fort Rucker in terms of the quality and professionalism of its instruction. The first full year of operation was 1983, and by September 1985, EAATS had graduated one thousand students. At the time, the curriculum included twenty-one various aviator skill qualification courses and six aviation safety classes. In a typical year, over 5,000 flying hours and nearly 14,000 simulator hours were dedicated to flight instruction. By the end of the decade, EAATS had established a reputation as a utility and cargo helicopter instruction facility of quality second only to Fort Rucker. Even Regulars and Army Reservists filled training slots, and military aviators from Canada, Israel and other allied nations journeyed there for world-class instruction.[59]

The success of EAATS and the fielding of increased numbers of attack helicopters to the ARNG accelerated the creation of a western regional training site. The rise of the Cobra and the imminent fielding of the Apache meant that the western site would focus on the attack and aeroscout helicopter missions. Both Arizona and Utah lobbied for the site, but the political influence of Arizona's congressional delegation and the great advantages of a prospective site north of Tucson carried the day. With the success

# Eastern ARNG Aviation Training Site (EAATS)

The Eastern ARNG Aviation Training Site was established on August 1, 1981, with the mission of conducting a range of individual aviator qualification training not available in the states. Nestled amidst the mountains of south, central Pennsylvania, EATTS is located on Muir AAF at Fort Indiantown Gap. It operates under the management and supervision of NGB, with the TAG, Pennsylvania providing administrative, logistical and operational support.

From its earliest beginnings, EAATS has grown into an internationally recognized aviation training facility. Its first headquarters was located in Building T-9-68 on Fort Indiantown Gap which housed a staff of seventy-two officers, warrant officers and enlisted personnel. Col. Bill D. Badger served as the first EAATS commander from 1981 until 1985. A UH-1 Flight Simulator that had operated at Fort Indiantown Gap since 1977 was a vital part of the school's initial operations. From the beginning, Pennsylvania's expansive AASF #1 provided maintenance support for training activities.

EAATS reached full operational capability by the end of 1983, graduating a total of 119 students that first year. Aircrew qualification training was provided on seven different types of aircraft. At the same time, the school provided additional training in a number of different areas: quality assurance, flight simulation, mobile training teams, tactical and procedural standardization, enlisted crewmember training and aeromedical support.

As the 1980s progressed, EAATS continued to expand and improve as its primary focus became utility and cargo helicopter instruction. A sustained building program resulted in a functional campus adjacent to the AASF #1 site that provided a new headquarters building, simulator buildings, a student aircrew dormitory and a dining facility. The addition of AH-1 and UH-60 simulators in the late 1980s and early 1990s added to EAATS' reputation as a world class training site. In addition to the active component and the USAR, other federal agencies and allied nations began to send students there on a regular basis. A varied fleet of aircraft provided mission support, all maintained by AASF #1. In September 1995, the school reached a major milestone with the graduation of its 10,000th student.

In 2008 EAATS marked its twenty-seventh year of operations as an instructional flight facility of excellence. The annual course load averages approximately 1,600 students who attend courses lasting from 3 to 10 weeks. The facility continues on a program of expansion and improvement in order to meet the changing training needs of ARNG aviation. As the UH-1 fades into history, EAATS has become the lead agency for the fielding and institutional training of the ARNG's newest aircraft, the UH-72 Lakota.

of EAATS and his obvious expertise in establishing and running a regional training site, Colonel Badger transferred to Arizona to command the new facility.[60]

The Western ARNG Aviation Training Site (WAATS) was established at Marana, Arizona, thirty-five miles northwest of Tucson on the site of Silver Bell Army Heliport. Unlike the EAATS, which had a number of buildings immediately available for use, the WAATS had to be built from the ground up. Construction on the initial set of facilities began in May 1985 and was completed eighteen months later. WAATS opened on October 1, 1986, focusing on the instruction of Arizona ARNG attack helicopter crews as the best way to test and validate its curriculum. The following year, the school was available to Army Guard attack helicopter units nationwide. During 1988 more than one hundred students conducted over 3,000 hours of flight training and nearly 1,500 hours of AH-1 simulator training. The next year the number of students and hours of instruction nearly tripled, with the student population including active Army and Army Reserve flyers.[61]

Participation in massive, joint exercises in Europe, Asia and the Middle East afforded ARNG aviators with other valuable training opportunities. Starting in the 1970s, citizen-soldiers deployed to Europe each year for Return of Forces to Germany (REFORGER) exercises. The ARNG's role in REFORGER increased each year throughout the 1980s. Starting in 1980, the United States began BRIGHT STAR exercises, the biennial deployment of forces to Egypt and the Sudan. Two years later, the first Guardsmen went to the Middle East for training and felt the sand, heat, and wind of the Egyptian desert. In the Pacific, Guardsmen deployed to Korea on TEAM SPIRIT, an annual exercise designed to test America's response to the sudden outbreak of war in Asia. In addition, ARNG aviators experienced tough, realistic maneuvers at the new National Training Center (NTC) located at Fort Irwin, California, and provided logistical, maintenance and transportation services to both field exercises and the installation.

Starting in 1983, the ARNG began large deployments to Panama, Honduras and other countries in Central America to rebuild roads and bridges and provide humanitarian support.

During the course of the 1980s, increasing numbers of Guard units and personnel were deployed during annual training to participate in joint exercises such as REFORGER in Europe and TEAM SPIRIT in South Korea. Here a Guard UH-1 delivers command personnel to a site in the field during REFORGER 1983. *National Guard Bureau*

Staff Sgt. Daniel Piel of Wyoming's 349th Air Traffic Control Detachment directs Guard aircraft during an exercise at Camp Guernsey, Wyoming, in 1986. *National Guard Education Foundation*

# Western ARNG Aviation Training Site (WAATS)

The Western ARNG Aviation Training Site (WAATS) was established on October 1, 1986, with the mission of conducting attack and aeroscout helicopter training. Located at Marana, Arizona, thirty-five miles northwest of Tucson, the WAATS facility is centered on the Silver Bell Army Heliport, a 160-acre complex. The combination of its attack helicopter training mission and Wild West training environment has earned for WAATS the nickname "Gunfighter University".

Unlike the EAATS which enjoyed an already established support base at Fort Indiantown Gap, the WAATS was conceived, planned and constructed from the ground up. With a staff of approximately 260 personnel, the WAATS enjoys its own headquarters building, simulator facilities, student dormitory and dining facility. An organic Maintenance Battalion services the school's aircraft. A number of other resident activities share the Silver Bell Army Heliport complex with the WAATS. These include the Arizona ARNG's 1-285th Attack Battalion, armed with the Apache Longbow, Arizona's AASF #2, and Peace Vanguard, a joint venture between the U.S. Army and the Republic of Singapore Air Force to provide allied forces unit training on the AH-64D.

A number of factors resulted in the placement of WAATS in south, central Arizona. With plentiful sunshine and low humidity, the region provides 360 VFR flying days per year. Once planned, flight training schedules are rarely disrupted by inclement weather. Low humidity and salt-free air reduce incidences of corrosion, one of the biggest maintenance threats to aircraft. An expanded local training area with a low population density offers student pilots extensive landing rights and opportunities for flying in varied terrain. With its emphasis on attack helicopter training, the WAATS needed easy access to firing ranges provided by the Barry M. Goldwater Range in southwestern Arizona. Several surrounding military installations, including Luke Air Force Base in Phoenix, Davis-Montham Air Force Base in Tucson, and the Army's National Training Center at Fort Irwin, California, provide opportunities for joint training. While Utah also lobbied for the WAATS, the site selection process ultimately favored the near ideal training environment that Arizona offered.

WAATS has gone through several major evolutions in its training program. From 1986 to 1993, it provided aviator training only in the attack and aeroscout missions. Starting in 1993, it began enlisted training as well. A major step forward occurred in 2002, when WAATS began to train personnel on the AH-64A. Two Apache and one Black Hawk simulators provide students with the most advanced technological training. In addition to instructing ARNG aviators, WAATS has trained pilots and crewmen from several allied nations and other U.S. federal agencies. Student output varies from year to year, with Gunfighter University training 5,211 students during 2001-2008.

Given the difficult terrain and distances involved, ARNG aviation was an integral part of operations. A typical example of an aviation deployment occurred in Honduras in the spring and early summer of 1988. A task force (TF) of eleven UH-1s drawn from a number of states deployed to the central Honduran highlands to support road construction efforts. An altitude of 7,500 feet, temperatures well over one hundred degrees, adverse weather, limited refueling locations, and austere operating conditions presented unique challenges. Aviators provided support by moving passengers and sling loading building materials, heavy equipment and water bladders to remote construction sites, all without a single accident.[62]

One of aviation's most unique training opportunities came near the end of the decade. In 1986 the ARNG provided the crew chiefs for the nine aircraft that comprised the all-Army U.S. Precision Helicopter Team that competed in the World Helicopter Championships held in England. Furthermore, all competing enlisted crewmembers for each U.S. team, active and reserve components, were Guardsmen. The final results placed a Texas ARNG crew in fifth place worldwide, while the U.S. team retained its overall World Team Championship standing. Held at a host nation site around the world every three years, ARNG aviators continue to participate as members of the U.S. Precision Helicopter Team.[63]

## Domestic Missions in the 1980s

Compared to the turbulent 1960s, National Guardsmen provided little military support to quell domestic disturbances during the 1970s and 1980s. For the most part, large-scale natural disasters were less frequent as well. At the local level, state soldiers responded as usual to fires, floods and hurricanes. Aviators were an integral part of disaster response operations; the UH-1 and the CH-47 came to symbolize Guard support during emergencies.

By the 1970s, ARNG helicopters, such as this UH-1D from Mississippi's 131st Aviation Battalion, became a frequent sight in the aftermath of disasters. During flooding along the Gulf Coast caused by Hurricane Elena in September 1985, Hueys evacuated stranded survivors and delivered supplies to areas inaccessible to wheeled vehicles. *Army Aviation Museum*

However, the 1980s saw a number of major natural disasters that required a substantial National Guard response. A catastrophe unique to the North American continent in the twentieth century occurred with the sudden eruption of Mount Saint Helens in Washington State on Sunday morning, May 18, 1980. Steam, smoke and ash belched into the air in frightening thick plumes, rising for thousands of feet. Mud slides rushed outward from the mountain, sweeping along trees, wildlife, buildings and humans alike. In the aftermath, a layer of cinders as deep as seven inches covered parts of Washington and Oregon. Westerly winds carried clouds of ash over the Great Plains and the Midwest, a stark reminder of the mountain's awesome power.

Within two hours of the eruption, Guard aviators were in the air saving lives. The first response came from the Attack Helicopter Troop of the 116th ACR who had just arrived at Washington's Yakima Training Center for AT. The troop's fourteen UH-1Hs and UH-1Ms were the first ARNG aircraft to enter the blast area. Pilots avoided thick pillars of smoke and ash, but visibility was still severely limited, making flying conditions hazardous at best. Volcanic cinders

clogged air filters and engines, and when touching down to pick up survivors, rotor wash whipped up ashen clouds that reduced visibility to zero. Pilots were able to report the situation in the blast zone to civil and military authorities by radio. In the first day alone, ARNG helicopters rescued fifty-four residents. Helicopter crews engaged in search and rescue missions during the first few days, flying six to seven hours each day and stopping only to refuel, rest and eat. In all, Washington State helicopters rescued 125 civilians and recovered the bodies of seven others.[64]

Other aviation units helped as well, but perhaps Oregon's 1042nd Military Intelligence Company (Aerial Surveillance) made a singular, unique contribution. The 1042nd flew the twin-turboprop OV-1 Mohawk, a Vietnam era aircraft equipped with infrared cameras to track enemy movements at night by detecting heat rather than relying on visible light. The unit happened to be already assembled for weekend drill when the mountain erupted and was immediately pressed into service. The 1042nd made day and night runs over Mount Saint Helens, providing photos that allowed members of the U.S. Geological Survey to monitor the volcano's activities.[65]

The OV-1 Mohawks assigned to Oregon's 1042nd Military Intelligence Company used their instrumentation to closely monitor further activity on Mount Saint Helens after the volcano's massive eruption in May 1980. *National Guard Educational Foundation*

Maj. Gen. Robert J. Collins, Washington's TAG at the time, eloquently summed up the contributions of ARNG aviators in a speech to the State Senate in Olympia once the crisis had passed:

> The mission of our helicopters was to save life and limb. And save it they did, under extremely hazardous conditions...Each landing and takeoff in the disaster area brought the danger of vertigo, as ash blown by the downwash of the blades blotted out visual reference to the ground. Gases rising from the mud and ash burned the throats of aircrews and made even talking difficult...We are very proud of the courage and skill displayed by our helicopter crews.[66]

In September 1989 Hurricane Hugo devastated the U.S. possessions in the Caribbean before making landfall in South Carolina where damage was considerable. St. Croix, in the U.S. Virgin Islands, was among the hardest hit. Every Guard facility on the island was damaged. At the St. Croix airport, the roof of the AASF collapsed, crushing two UH-1s beneath it. Next door, the Guard territorial headquarters was also heavily damaged. With most infrastructure knocked out, the need for outside aid was immediate. U.S. Navy ships rushed to St. Croix to provide shelter, power and other support for first responders arriving from other locations.[67]

For the first time, Guard aviators deployed outside CONUS to respond to a natural disaster. On September 30, two Kentucky Black Hawks with seventeen personnel onboard lifted off from the Frankfort AASF bound for the Caribbean. They flew to Jacksonville, Florida, where the two aircraft and crewmen were loaded onto a New York Air Guard C-5A Galaxy for the flight to St. Croix. At the same time, a group of volunteer aircraft maintenance technicians and four vehicles loaded onto C-130s at Louisville for a direct flight to the Virgin Islands. Once joined on St. Croix, aircraft maintenance kept the Black Hawks in the air, transporting needed cargos of medical

supplies, construction materials, water and food. "It felt really great to put into action what we've been trained to do," said Sgt. Ron Penn, a Black Hawk crew chief. "Helping out in the Virgin Islands was definitely in keeping with the Guard's tradition of responding rapidly to people in need."[68]

Only a few weeks after Hurricane Hugo, the National Guard's largest response to a natural disaster until that time occurred. On the late afternoon of October 17, 1989, a huge earthquake shook the north central coast of California. A World Series baseball game was about to start in San Francisco when the quake struck, and millions viewing on television saw the strong tremors interrupt the pre-game festivities and bewilder those in the stadium. Throughout the San Francisco Bay area, buildings and homes shook and fell, and bridges and elevated road decks along expressways collapsed.[69]

California Guard aviation units immediately swung into action. At the armory of Company G, 140th Aviation Battalion about 80 percent of its members arrived on their own. Soon, the company was able to get its CH-47s airborne and working in support of first responders. Over the following two weeks, the Chinooks transported law enforcement personnel and hauled mail and supplies. Other California aviators performed similar missions. At the peak of rescue and recovery operations, nearly all of the California National Guard's 20,000 personnel were on state active duty.[70]

A CH-47 Chinook from California's 140th Aviation Battalion has just delivered these members of the 670th Military Police Company to Camp Roberts, California, for an earthquake training exercise in 1974. *National Guard Educational Foundation*

By the early 1980s, the American people were becoming more and more concerned over lawlessness caused by widespread drug usage and the flow of illegal narcotics into the country. State and national leaders increasingly called for the military to support law enforcement in the "counter-drug war." With their inherent mobility and superb communications, ARNG aviation units were handsomely suited to assist law enforcement. As early as 1977, the Hawaii Guard had become involved in the detection and eradication of marijuana fields. Four states reported ARNG counter-drug operations in 1983, and within five years, thirty-two states had committed 4,502 Guardsmen to 456 counter-drug missions. In 1989, Congress appropriated $300 million for the Pentagon's fight against drugs; $40 million was specifically earmarked for the ARNG.[71]

The counter-drug mission added a new dimension to ARNG aviation's role in civil support operations. Unlike most other missions, drug interdiction and surveillance required close and often sensitive coordination, as well as detailed pre-mission planning. Only after fully understanding the nature of the mission—day or night, duration, and any unique speed or lift requirements—could aviation planners assign the correct aircraft and crews. Air-to-ground communications needs, the wear of NVGs, and the use of hoists and sling rigging were other important considerations. In turn, law enforcement had to understand the capabilities and limits of ARNG crews and aircraft.[72]

Under the supervision of the ARNG Aviation Division, the states safely and efficiently conducted drug interdiction and surveillance missions. One of the most common forms of support was aerial surveillance, which was especially effective in locating fields of illegal marijuana. Another common mission was the transport of law enforcement personnel to

locations where they could respond to known or suspected drug activity. A by-product of the counter-drug effort was to create a small cadre of very experienced, full-time aviation personnel well versed in law enforcement procedures and methods. In a moment's notice, the counter-drug cadre could be pressed into service during other unexpected crises.[73]

By the end of the 1980s, drug enforcement efforts comprised a considerable effort for ARNG aviation. In 1988 they flew more than 14,000 hours in surveillance and interdiction efforts. Activity was greatest in Florida, Texas, New Mexico, Arizona and California, which sat astride recognized illegal immigration and drug trafficking routes. The largest ARNG aviation assisted "bust" of the year came when an OV-1 Mohawk operating in southern California resulted in the seizure of nearly 870 pounds of cocaine. In 1989 ARNG aviation directly assisted in the destruction or confiscation of over four million marijuana plants, nearly 47,000 pounds of processed marijuana, almost 11,000 pounds of cocaine, $2 million in cash and nearly one hundred vehicles and automatic weapons. In all, the seizures translated into $9.8 billion in illegal drugs that did not reach the streets of America.[74]

In the two decades after the Vietnam War, the ARNG aviation force grew tremendously in terms of size and capabilities. The Total Force Policy brought Army aviation and ARNG aviation closer than ever before. Modernization initiatives such as the UH-60 and the AH-64 were well underway but far from complete. Yet by 1989 a distinct feeling of uncertainty was in the air as the Cold War suddenly came to an end and public discussions began over cuts in the defense budget. Little did they know it, but ARNG aviators were about to experience two powerful shocks to the system: war and massive cuts in defense spending.

## NOTES

[1] Robert W. Sennewald and James D. Blundell, *The Active and Reserve Components: Partners in the Total Army* (Arlington, VA: Association of the United States Army, December 1989), 9-10.

[2] Secretary of Defense James R. Schlesinger, "Readiness of the Selected Reserve," memorandum, August 23, 1973.

[3] NGB, *Annual Report*, 1970, 35.

[4] Ibid.

[5] Ibid.

[6] Ibid.

[7] NGB, *Annual Report*, 1971, 36; NGB, *Annual Report*, 1972, 36; NGB, *Annual Report*, 1976, 39; and NGB, *Annual Report*, 1979, 37.

[8] NGB, *Annual Report*, 1972, 36; and NGB, Annual Report, 1974, 145.

[9] NGB, *Annual Report*, 1972, 25, 29; and NGB, *Annual Report*, 1976 and Transition Quarter, 31.

[10] "That's a 'Grease Monkey'?", *National Guard*, January 1974, 34; "All Female Flight," *National Guard*, October 1986, 42; *National Guard*, January 1974, 34; and "From Pennsylvania," *U.S. Army Aviation Digest*, October 1982, 37.

[11] NGB, *Annual Report*, 1975, 37.

[12] NGB, *Annual Report*, 1971, 39; NGB, *Annual Report*, 1972, 39; and NGB, *Annual Report*, 1975, 37.

[13] Mr. Al Marshal, interview with the author, ARNGRC, June 25, 2009; and NGB, *Annual Report*, 1972, 39.

[14] NGB, *Annual Report*, 1976, 41.

[15] NGB, *Annual Report*, 1972, 39; and NGB, *Annual Report*, 1976, 39.

[16] NGB, *Annual Report*, 1979, 37; and Pennsylvania ARNG, "Army Aviation Support Facility, Fort Indiantown Gap: 30th Anniversary Celebration," ceremony program, May 13, 2005, 1-4.

[17] "Reserve Aviation Unit of the Year," and "ARNG Aviation Unit of the Year" listings are available at www.quad-a.org/awards and last accessed on June 27, 2008.

[18] "APG's History," located at http://www.apg.army.mil and last accessed on June 24, 2009; and "Aberdeen Proving Ground (APG)-Edgewood Area (MD-032)" located at http://www.mde.state.md.us/assets/documents/APG-Edgewood and last accessed on June 24, 2009; and Mr. Ray Engstrand, on-site interview with the author, Edgewood Area, Aberdeen Proving Ground, May 28, 2009.

[19] Mr. John J. Stanko, Jr., interview with the author, ARNGRC, September 2006.

[20] Mr. Marshal, interview.

[21] NGB, *Annual Report*, 1974, 145; and Maj. Kenneth Boley, "ARNG Multi-Media Group," *U.S. Army Aviation Digest*, November 1981, 16-17.

[22] John J. Stanko, Jr., "Army National Guard Aviation," *U.S. Army Aviation Digest*, November 1981, 9.

[23] NGB, *Annual Report*, 1976, 39.

[24] NGB, *Annual Report*, 1975, 38; and Lt. Col. Roger Perkins, "ARNG Safety Branch," *U.S. Army Aviation Digest*, November 1981, 14-15.

[25] Ibid.; and NGB, *Annual Report*, 1976, 41.

[26] NGB, *Annual Report*, 1975, 36; and NGB, *Annual Review*, 1977, 33.

[27] NGB, *Annual Report*, 1976, 39; and NGB, *Annual Review*, 1977, 33.

[28] NGB, *Annual Review*, 1977, 33-34.

[29] Ibid.

[30] Ibid.

[31] Maj. Gen. Emmett H. Walker, Jr., Director, ARNG, "Preparedness," *U.S. Army Aviation Digest*, November 1981, 2-3.

[32] NGB, *Annual Review*, 1981, 37.

[33] LePore, *Army Aviation*, 24-26.

[34] Ibid.

[35] Col. William D. Badger (Ret.), "ARNG and Aviation Branch," e-mail input to the author, July 17, 2009.

[36] Utah State Army Aviation Officer, "The History of Utah Army Aviation," information paper, n.d., 1-2; and NGB, *Annual Review*, 1978, 33.

[37] NGB, *Annual Review*, 1980, 36.

[38] NGB, *Annual Review*, 1984, 30; NGB, *Annual Review*, 1989, 390; and NGB, *Annual Review*, 1990, 31.

[39] NGB, *Annual Review*, 1978, 33.

[40] NGB, *Annual Review*, 1986, 25; and NGB, *Annual Review*, 1989, 39.

[41] NGB, *Annual Review*, 1987, 40.

[42] NGB, *Annual Review*, 1983, 29.

[43] NGB, *Annual Review*, 1982, 39; and Stanko, "Army National Guard Aviation," 8.

[44] "Fielding of the AH-64 Apache Advanced Attack Helicopter," *U.S. Army Aviation Digest*, July/August 1989, 54-55; and NGB, *Annual Review*, 1988, 53.

[45] Ibid.

[46] Kenneth Finlayson, "The Lords of Darkness," *Veritas*, Vol. 3, No. 4, 2007, 52-60.

[47] Ibid.

[48] Ibid.

[49] Col. Raymond D. Engstrand, "ARNG Aviation Classification Repair Activity Depots: In Support of the Fleet," *U.S. Army Aviation Digest*, July/August 1989, 16-20.

[50] Ibid.

[51] Ibid.

[52] Ibid.

[53] Lt. Col. Eric Braman, "European AVCRAD: An AMC-E Asset," *U.S. Army Aviation Digest*, July/August 1989, 21-23

[54] Brig. Gen. Herbert R. Temple, Jr., Deputy Director, ARNG, "The Aging Saber: Sharpening for War," *U.S. Army Aviation Digest*, November 1981, 4-6.

[55] NGB, *Annual Review*, 1982, 38.

[56] NGB-AVN-OO, "Regional ARNG Aviation Training Site (AATS) Concept Development," information paper, January 3, 1983, 1.

[57] Ibid., and Maj. Gen. Herbert R. Temple, Jr., Director, ARNG, "Eastern ARNG Aviation Training Site," All States' Memorandum with enclosures, September 9, 1982, 1-7.

[58] Col. William D. Badger (Ret.), interview with the author, Tucson, Arizona, March 14, 2009.

[59] Maj. Gen. Jessica L. Wright, TAG, Pennsylvania, interview with the author, JFHQ-Pennsylvania, Fort Indiantown Gap, Pennsylvania, November 12, 2008; and Commander, EAATS, "Eastern AATS Significant Events, 1981-1995," memorandum, n.d., passim.

[60] Col. Badger, interview.

[61] NGB, *Annual Review*, 1985, 34; NGB, *Annual Review*, 1987, 38; NGB, *Annual Review*, 1988, 56; and NGB, *Annual Review*, 1989, 40.

[62] "Fuertes Caminos '88: A Success Story in Honduras," *U.S. Army Aviation Digest*, May 31, 1989, 41-42.

[63] NGB, *Annual Review*, 1986, 24.

[64] "A Mountain Queen Attacks…The Guard Fights Back," *National Guard*, May 1980, 14-17; and "She Roared and Blew—But the Cleanup Has Just Begun," *National Guard*, August 1980, 25-27, 38.

[65] Ibid.

[66] Ibid.

[67] "The Devastation of a Hurricane!" *National Guard*, February 1990, 18-20.

[68] Ibid.

[69] "A World Series Earthquake," *National Guard*, February 1990, 28-29.

[70] Ibid.

[71] *National Guard*, July 1989, 4; and *National Guard*, August 1989, 22.

[72] Brig. Gen. William A. Navas, Jr., Deputy Director, ARNG, "National Guard Bureau Support to Civil Authorities," *U.S. Army Aviation Digest*, July/August 1989, 6-7; and Ron Eaton, "Support to Drug Enforcement Efforts," *U.S. Army Aviation Digest*, July/August 1989, 8-11.

[73] Ibid.

[74] Ibid.; and NGB, *Annual Review*, 1989, 17.

# CHAPTER FOUR

## WAR AND PEACEKEEPING, 1990-2000

The fall of the Berlin Wall in November 1989 marked the end of the Cold War which had lasted over four decades. The immediate result of reduced tensions between East and West was strident cries across America for deep cuts in defense spending in the hopes of garnering a "peace dividend" to fund domestic social programs. Massive cuts in defense spending soon followed, reflected in widespread force reductions in all of the services, including the reserve components.

With the Cold War ended, and an unexpected military campaign in the Persian Gulf region successfully concluded, the Army searched for a new mission. Since the end of World War II, the United States had relied on forward deployed forces to defend its vital national interests. Declines in defense spending resulted in a reduced overseas presence. In future wars, smaller, more mobile expeditionary forces would deploy rapidly from CONUS to threatened regions. The most likely scenario for war included two nearly simultaneous conflicts waged in the Middle East and on the Korean peninsula. Other potential threats included rogue nations and terrorist groups armed with weapons of mass destruction (WMD). Short of war, the U.S. military pursued a strategy of peacetime engagement that saw large numbers of troops deployed as peacekeepers to Africa, the Caribbean, the Balkans and the Middle East.

The winds of change that blew throughout the 1990s severely buffeted the ARNG and its aviation force. The Army Guard shrank in terms of its overall size and assigned units, with commensurate cuts in flying forces. Even as it downsized, aviation strove to modernize itself and to keep its personnel fully trained and qualified. Guard aviators deployed alongside their active duty counterparts on peacekeeping missions around the globe. At home, citizen-soldier aviators expanded and enhanced their ability to react to domestic emergencies, including a broader role in the war on drugs and the response to Hurricane Andrew, one of the nation's most costly natural disasters.

Following Vietnam, the U.S. military had focused on the defense of Europe as its primary mission. In a strange twist of fate, the end of the Cold War brought another armed conflict, rather than a new age of peace. Instead of fighting in the urban areas and forested regions of Central Europe, American troops found themselves going to war in the barren, arid deserts of the Middle East.

### The Persian Gulf War

By all measures, the ARNG in the summer of 1990 had never before been in better shape. At the beginning of the year, ARNG strength stood at an all-time high of almost 457,000 citizen-soldiers. In terms of operations and readiness, the force was at peak proficiency as well. The all-volunteer Army and the Total Force Policy were working smoothly, sustained by dollars from the Reagan Buildup.

The ARNG aviation force reflected a healthy posture as well. The flying program reached

437,690 hours in 1990, the most hours Guard members had ever flown in a single year. And pilots and air crews had done it safely; for the first time ever the ARNG recorded a "zero" Class A accident rate. Modernization was apace with the fielding of the AH-64 and the UH-60. The EAATS, WAATS and other training locations were operating at full capacity and up to standards.[1]

A CH-47 Chinook from Company G, 149th Aviation, Texas ARNG kicks up dust at a forward base in the Saudi Arabian desert as it delivers supplies during the buildup for Operation Desert Storm in 1991. *Army Aviation Museum*

However, the ARNG aviation force soon found itself once again headed for war. With little warning, Saddam Hussein launched the Iraqi Army on a blitzkrieg style invasion of neighboring Kuwait on August 2, 1990. By attacking and occupying the emirate, Saddam hoped to expand his control over oil reserves, thereby becoming the undisputed leader in the Persian Gulf region. Within days of the invasion, President George H.W. Bush ordered American forces to deploy to Saudi Arabia to defend the kingdom against further Iraqi aggression. Operation Desert Shield became the Army Guard's largest mobilization since the Korean War. In the first three months, as negotiations to convince the Iraqis to withdraw from Kuwait dragged on, a relatively small number of Guard units were ordered to active duty. Only one Guard aviation unit was mobilized in this period: Virginia's 986th Medical Detachment (Air Ambulance) (AA). The unit entered active duty on September 20, and was deployed to Fort Bragg, North Carolina, to backfill for an active duty AA unit that had already deployed verseas.[2]

In the early phase of Operation Desert Shield, NGB's Central Scheduling Section, which scheduled missions for support aircraft, arranged high priority flights for the movement of critical supplies and equipment within CONUS during August and September 1990. Those flights became known as the "Minuteman Express" and moved key cargos from locations all over the country to Charleston, South Carolina, where the items were loaded onto other aircraft bound for the Persian Gulf. The Minuteman Express transported seventeen passengers and 39,704 pounds of cargo while flying 489 hours before the mission ended.[3]

While some Guard aviators were busy moving supplies across CONUS, a group of twenty-five volunteers from ten different states served in the Persian Gulf region ferrying troops and supplies into and around Saudi Arabia. Designated as the "C-23 Special Project Group" they flew five C-23B Sherpa aircraft. The group was based in Abu Dhabi, United Arab Emirates, where most of the supplies arrived from the states for transfer to theater. Capable of using short, less developed runways than larger cargo aircraft, the "Sand Sherpas," as they came to be known, moved hundreds of personnel and 702,681 pounds of cargo before the project ended in November 1990.[4]

By early November, it was obvious that Saddam Hussein would not withdraw without the use of force, and the focus of the mobilization changed dramatically. Instead of fielding a defensive force to protect other nations, the effort focused on building a credible, offensive force capable of ejecting the Iraqis from Kuwait. Suddenly, a large number of ARNG aviation units received mobilization orders. From one flying unit already on active duty on November 1, by the end of the month there were ten, with two more added in December. Three additional units entered active duty in February, making a total of

## C-23 Sherpa

The only Army aircraft manufactured by a non-American firm is the Short Brothers' "Sherpa" made in Northern Ireland. The Sherpa name comes from the mountain porters of Nepal who have earned a reputation for carrying large loads over long distances for mountain climbing expeditions. Six C-23As were originally bought by the U.S. Air Force and then transferred to the ARNG in 1990. They were added to ten B models built and delivered directly to the Guard in 1989. The only significant difference between the two models is that the Bs have cabin windows and the change to a twin-tail fin configuration instead of the A model's single fin.

The Sherpa is a medium-sized cargo aircraft capable of using shorter landing strips than most other cargo carriers. Its box-like shape, measuring only 58 feet long with a wing span of 75 feet, allows for up to 9,000 pounds of cargo or as many as 30 passengers, or a combination of the two. With its rear loading ramp, pallets can be inserted by fork-lift into the cargo bay.

The A models are powered by two Pratt and Whitney Canada PT6A-45-R turboprops producing 1,198 hp each. Model Bs have PT6A-65AR engines producing 1,424 hp each. The earlier models have a cruising speed of 184 mph and a range of about 770 miles while the upgraded models can fly at 223 mph for 1,185 miles. The A models have a ceiling of just 11,500 feet while the B's can reach 20,000 feet. Each model has a crew of three: two pilots and a flight engineer.

With the war on terrorism, the Sherpa has lived up to its name by carrying heavy loads over long distances in Afghanistan and Iraq, sometimes under enemy fire.

fifteen flying units serving during the crisis. Not all of these units deployed to theater; half were used as backfill in replacing deployed units. Others were still at their mobilization stations when the war ended. Maine's 112th Medical Company, Air Ambulance (AA), served in Germany. In all, 2,431 ARNG aviators and support personnel served on active duty during the Persian Gulf War, flying 215 aircraft, mostly UH-1V or H models.[5] (See Table 3.)

Of the fifteen Guard flying units mobilized, twelve were AA detachments or companies. Three of these were in the middle of reorganization from other configurations to become AA units when suddenly mobilized. They suffered from shortages of qualified medics and the medical kits used on helicopters. At least one, Iowa's 1187th Medical Company, had a detachment in Minnesota that it had never trained with before mobilization. The detachment commander was reassigned, causing a number of problems in the first weeks of the company's service. Only one of these three units, Louisiana's 812th AA, deployed to theater.[6]

All five AA units remaining in the states were assigned to backfill deployed units at military bases across the country. The concern that U.S. troops might incur mass casualties from Iraqi chemical weapons was real, and MEDEVAC units were mobilized with the additional intent of beefing up medical assets at major installations where chemical casualties might be treated. Those ARNG units with responsibilities at more than one location split their aircraft and personnel into as many detachments as necessary to cover their areas of operation. Most of their duties involved transporting soldiers injured in training accidents and other activities to nearby military hospitals. In addition, most flew MEDEVAC missions for surrounding communities.[7]

The six AA units deployed to Saudi Arabia shared some things in common. All operated on 24-hour-a-day basis. Prior to the start of the ground war, they trained extensively on battlefield entry, recovery of the wounded, and safe extraction of casualties from a hot landing zone.

# TABLE 3. THE PERSIAN GULF WAR, 1990-1991 MOBILIZED ARNG AVIATION UNITS

| Date Mobilized | State | Designation | Area of Assignment |
|---|---|---|---|
| | | **Air Traffic Control Units** | |
| 1/17/91 | AZ | 416th Aviation Platoon ATC | SWA |
| 12/11/90 | MD | HHD, 29th Aviation Group ATC | SWA |
| 1/17/91 | TX | 49th Aviation Platoon ATC | SWA |
| 1/17/91 | VT | 150th Aviation Platoon ATC | SWA |
| 1/17/91 | VT | 103rd Aviation Company (ATC Maint) | SWA |
| | | **Air Ambulance (AA) Units** | |
| 11/17/90 | AR | 296th Medical Company | Ft. Polk |
| 11/21/90 | CA | 126th Medical Company | Fts. Bliss, Houston/Honduras |
| 2/1/91 | FL | 199th Medical Company | Fts. Bragg, Stewart, Pickett; Charleston Air Force Base; USMC Air Station, Cherry Point |
| 11/21/90 | IA | 1187th Medical Company | Fts. Riley, Sill, Hood |
| 11/21/90 | LA | *812th Medical Detachment | SWA |
| 12/6/90 | ME | 112th Medical Company | Germany |
| 11/21/90 | MN | Detachment 1, 1187th Medical Company | Fts. Riley, Sill, Hood |
| 11/29/90 | MO | 1267th Medical Company | SWA |
| 11/17/90 | NE | *24th Medical Company | SWA |
| 11/29/90 | NE | Detachment 1, 1267th Medical Company | SWA |
| 11/21/90 | NH | 1159th Medical Company | Fts. Campbell, Knox, McCoy |
| 9/20/90 | VA | *986th Medical Detachment | Ft. Bragg/SWA |
| 11/21/90 | WV | 146th Medical Company | SWA |
| 11/21/90 | WY | 1022nd Medical Company | SWA |
| | | **Miscellaneous** | |
| 2/13/91 | CT | 1109th AVCRAD | Groton, CT; SWA |
| 2/12/91 | NC | 1-130th Aviation (Attack Helicopter) | Ft. Hood (AH-64) |
| 12/6/90 | TX | Company G, 149th Aviation | SWA (CH-47) |
| 2/12/91 | VA | Company B, 2nd Battalion, 224th Aviation | Ft. Rucker (UH-60) |

**C-23 Special Project Group (C-23B Sherpa)**

| | |
|---|---|
| AK | MO |
| AL | NM |
| CA | OR |
| CT | PA |
| MD | UT |

SWA=Southwest Asia
*Indicates award of Meritorious Unit Citation (MUC).

Flight crew members of West Virginia's 146th Medical Company (Air Ambulance) during the Persian Gulf War. They are (l to r): CW4 Larry Graham, pilot; Sgt. Henry Crawford, medic; Sgt. Scott Wagner, crew chief; and CW2 St. Clair, co-pilot. The 146th supported the 1st Armored Division during the war. *National Guard Educational Foundation*

Even as they trained, AA units supported other exercises and ongoing operations by medically evacuating soldiers injured in training or vehicle accidents. Everyone was prepared for a surge of casualties once ground operations commenced, but fortunately there were few coalition combat losses. The ground offensive of Operation Desert Storm commenced on February 24 and ended in just 100 hours. No Guard medical helicopters were shot down, but UH-1s from the 24th and 986th AA units did come under fire, though no crewmembers or patients were injured. In the days following the end of hostilities, ARNG AA units transported large numbers of Iraqi prisoners of war (PW) in need of medical care. Three Guard AA units were awarded the Meritorious Unit Citation for their outstanding achievements during the campaign.[8]

In addition to the twelve AA units, three other Guard flying units were mobilized. Texas' Company G, 149th Aviation, equipped with Chinooks, arrived in theater just as the air campaign got underway and spent the next four months moving supplies and troops. Mobilized on February 12, 1991, North Carolina's 1-130th Aviation and Virginia's Company B, 2-224th Aviation, arrived at their mobilization stations just before the war ended. A Roundout unit to the XVIII Airborne Corps, the Apache equipped 1-130th was certified as combat ready during exercises at Fort Hood. Virginia's unit was equipped with UH-60s and moved to Fort Rucker for additional training. Neither deployed overseas, and they were released from active duty soon after the end of hostilities.[9]

Six non-flying ARNG aviation units were also mobilized. These consisted of Connecticut's 1109th AVCRAD and five air traffic control (ATC) units. The 1109th was mobilized on February 13, 1991, the last ARNG aviation unit called up. While about 275 personnel of the unit stayed in Groton, another one hundred members deployed to the Persia Gulf to help clean and shrink-wrap 1,726 helicopters for return to CONUS after the war. In addition, they shipped $201 million in repair parts back home.[10]

A UH-1V of Virginia's 986th Medical Company (Air Ambulance) delivers a patient to Wisconsin's 13th Evacuation Hospital in the closing hours of Operation Desert Storm, February 28, 1991. *Virginia National Guard Historical Collection*

Mobilized ARNG ATC units supported air operations in the war zone. The first was assigned to Maryland's 29th Aviation Group and entered active duty on December 11, 1990. It arrived in the war zone just as the Operation Desert Storm air campaign started in January 1991. The Marylanders assumed the command and control functions for four other Guard ATC units that soon arrived in Saudi Arabia. The ATCs were dispersed to small airfields or heliports across the country. Arizona's 416th ATC Platoon was split

between three bases. The 49th ATC Platoon from Texas was assigned to the airfield at King Khalid Military City. Vermont's 150th ATC Platoon was initially based at an airfield near Riyadh. Soon after the ceasefire, elements of this platoon were moved to a desert pumping station inside Iraq. There they operated a ground control aviation station on a small landing field for helicopters, using a radar that allowed for instrument landings in bad weather.[11]

No Guard members were killed in action during the Persian Gulf War. However, thirty-four ARNG personnel died on active duty from a variety of causes, with helicopter crashes accounting for six aviators killed, four of them women. Three female flight crew members from California's 126th Medical Company crashed into a mountain in dense fog during a rescue mission in Honduras. The other three were members of Missouri's 1267th Medical Company. They too died while on a rescue mission, when caught in a violent storm prior to the unit deploying overseas.[12]

The mobilization for the Persian Gulf War constituted the largest call-up of ARNG flying units until that time. The speed of the mobilization and the integration of active, Guard and Reserve units allowed for the assembly of an effective fighting team in the Persian Gulf. ARNG flying units relied on their training and standardization to operate seamlessly with other organizations of the Army aviation community. For these reasons, the war itself was a successful test of the Total Force Policy.

## Force Modernization

Even before the dust had settled from the Persian Gulf War, the Army faced the reality of massive cuts in defense spending and corresponding force reductions. The senior Army leadership was intent upon making substantial, equitable cuts to active duty, ARNG and USAR forces alike. During the 1990s, the ARNG experienced steep reductions in manpower, losing nearly 100,000 citizen-soldiers by the end of the decade. At the same time, the Army was determined to continue modernization, even through the throes of downsizing. The hope was that when reductions finally ceased, the remaining forces would be trained, modernized and ready for any conflict.

Perhaps more than any other segment of the ARNG, the aviation force was deeply affected by the strategy of cutting and modernizing at the same time. At the heart of aviation modernization was an Army-wide plan to divest older, less capable legacy aircraft, replacing them with newer, more capable aircraft. Because modern aircraft as a class were larger, faster, more lethal and capable of carrying larger loads, there was no need to replace aged aircraft on a one-to-one basis. As a result, the size of the overall aircraft fleet shrank significantly, an outcome that was not well received in many states. Some called the declines a "modernization famine," in that they welcomed newer aircraft but lamented the loss in overall numbers. Prior to the Persian Gulf War, ARNG aviation flew approximately 2,600 aircraft of all types, but by the end of the decade, the number had declined to around 2,100.[13]

While training in Michigan, a UH-1 air ambulance from the 441st Medical Detachment became disabled and was forced to land beside a road. It was retrieved and moved to a repair facility by a UH-60A from the 1155th Transportation Company. Both units were from the Kentucky ARNG. *National Guard Bureau*

With draconian cuts in defense spending and massive force structure reductions in the making, the ARNG recognized that continued modernization was absolutely essential in order for its aviation units to remain relevant. Operation Desert Storm had already demonstrated that modern aircraft were preferred in an active theater of war and that older, legacy aircraft were not welcome. The concern was that older aircraft, and the units that flew them, might become more and more irrelevant, eventually becoming inviting targets for additional force structure cuts. Alternately, units equipped with modern aircraft were much more valuable to the Army, whose aviation force was slated to become considerably smaller than what it had been during the Cold War.

One of the major programs that influenced ARNG aviation throughout the 1990s was the Army's Aviation Restructure Initiative (ARI). The objective of ARI was to reshape the entire Army aviation community to make it more compatible with a strategy of power projection, even during a time of downsizing. One of the program's main purposes was to repair force structure deficiencies identified in the 1980s regarding crew member and staff positions, as well as command and control and maintenance support. ARI was also designed to drive down operating costs, retire older aircraft, and reduce logistical requirements, all while staying within established funding levels.[14]

A second, related initiative that affected ARNG aviation was the 1993 "Off-Site Agreement." Tired of adjudicating internal Army disputes over force structure reductions, Congress directed the Army's three components to sit down together and settle their differences once and for all. The main objective of the negotiations was to realign and balance reserve component force structure along traditional lines—combat and combat support forces in the ARNG, and combat support and combat service support forces in the USAR—and to determine the full, final extent of the Army's force structure reductions. Maj. Gen. John R. D'Araujo, Jr., was the acting CNGB and

## CH-47 Chinook

The CH-47 entered Army service in 1962 and ARNG service in 1971. The twin-engine, tandem rotor Chinook performs as the Army's primary tactical cargo lifter by transporting ground forces, supplies, ammunition and other battle-critical cargo in support of worldwide combat and contingency operations. In Vietnam, the CH-47 earned a reputation as the Army's cargo carrying workhorse on the battlefield. Improved models of the Chinook have amply lived up to that reputation in Afghanistan and Iraq. The CH-47 has also proven its worth as an ARNG cargo and troop hauler during domestic emergency responses.

Each CH-47 has a crew of three and is capable of moving 35 fully loaded combat troops or 24 litters with three medics. Alternately, the Chinook can lift a total of 28,000 pounds of cargo. Capable of aerial insertions of heavy fire support, each Chinook can sling load one 155mm howitzer, carry its eleven man crew and 30 rounds of ammunition internally, thus making the gun mission capable upon landing.

Built in four major variants, most of those used by the ARNG over the years have been CH-47As and Cs. Starting in the late 1990s, the Army began upgrading these earlier aircraft into the D variant. The D models have improved power plants and rotor transmissions with better engine cooling systems. Each ship is powered by two Lycoming T55-GA-712 turbo-shaft engines capable of producing 3,759 hp each. The Ds have fiberglass rotor blades, giving them longer life in harsh desert conditions, and improved avionics and global positioning systems.

The CH-47D has a maximum speed of 196 mph, with a cruising speed of 137 mph. Depending on the weight of its load, it has a maximum range of 400 miles with a ceiling of 18,500 feet. Those armed for close support can carry two M240 machine guns, and specially equipped CH-47s carry one M134 minigun.

Part of the training for all Army aviators is how to survive a water landing, as demonstrated by a pilot from Virginia's 2-224th Aviation. *Virginia National Guard*

the new Director, ARNG at the time who had begun his military career in the aviation section of Hawaii's 29th Infantry Brigade before volunteering to fight in Vietnam as an infantryman. General D'Araujo's main goals for the Off-Site Agreement were to retain as much ARNG troop strength and aviation forces as possible.[15]

In October 1993, the Pentagon announced the results of the Off-Site Agreement during a televised press conference. The ARNG was allocated a strength level of 367,000 out of the 575,000 allocated to the reserve components. The USAR surrendered most of its attack, assault, and air ambulance aviation units and some of its cargo helicopters to the Guard. Eight months earlier, the Army chief of staff had approved ARI, and in reality, the aviation components of the two decisions were combined for implementation. Projections at the time indicated that after all ARI and Off-Site actions were complete, nearly 70 percent of ARNG aviation would be in modern aircraft.[16]

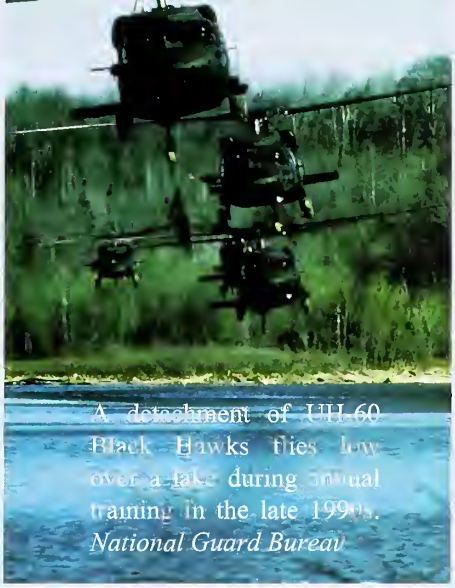
ARI and the Off-Site Agreement had significant influence in the states. The most obvious was the reduction in the total number of aircraft. NGB acknowledged the problem and established a goal of retaining at least 60 percent of the utility aircraft assigned in each state. Those remaining aircraft represented a repository of capability available for state missions and local needs. Though they were gaining newer aircraft for the older ones lost, aircraft reductions were still significant. For example, New York declined from 121 to 56 aircraft while suffering a 15 percent loss in aviation personnel. Even Alabama, with its strong aviation program and close ties to Fort Rucker, was not spared, suffering losses of 43 percent and 13 percent in aircraft and personnel, respectively.[17]

A flight of three AH-64 Apaches from Utah's 1-211th Aviation on a training mission in the 1990s. *Utah National Guard*

ARI and Off-Site Agreement implementation resulted in tremendous aircraft and personnel turbulence. In 1996 the Aviation Division supervised the movement of over 800 aircraft at a time when the entire fleet numbered around 2,700. Over 400 aircraft were accepted from production lines, refurbishment programs, and the Army Reserve or cross-leveled between states and units due to reorganizations. At the same time, nearly 400 older aircraft were shipped into retirement. The states implemented massive reorganization plans to align remaining aircraft and units with existing AASFs and maintenance facilities. A major goal of restructuring plans was to retain unit integrity as much as possible as the best method of promoting unit cohesion and preserving opportunities for upward mobility for officers, warrant officers and enlisted personnel alike.[18]

The continued fielding of the AH-64 remained central to the ARNG's modernization efforts. Before ARI and the Off-Site Agreement,

the ARNG was scheduled to receive thirteen Apache battalions. By the end of 1991, AH-64 battalions had been certified in North Carolina, South Carolina and Florida. The fourth unit—1-211th Aviation (UT)—was equipped, trained and certified in 1992. In the following years, three more attack battalions—1-149th (TX), 1-285th (AZ), and 1-183rd (ID)—went through Apache fielding and certification. In the end, the ARNG aviation force added additional AH-64 battalions in Pennsylvania and Missouri for a total of nine.[19]



A detachment of UH-60 Black Hawks flies low over a lake during annual training in the late 1990s. *National Guard Bureau*

The UH-60 modernization program continued to cause great concerns. Active Army force structure reductions early in the decade resulted in approximately 300 Black Hawks cascading to the ARNG, but UH-60 shortages remained acute. By the end of 1997, the ARNG had 430 UH-60s on hand, but another 565 were needed to replace UH-1s. Adding to the problem was the fact that the Army's procurement contracts for the UH-60 were scheduled to expire in 1996.[20]

Facing reality, the ARNG made plans for maintaining a blended utility helicopter fleet of UH-60s and UH-1s indefinitely. The thinking at the time was that the Huey was becoming operationally obsolete and logistically unsupportable on the battlefield. Compounding the problem was the fact that the highest priority ARNG aviation units were AA companies still equipped with the Huey. Still, the Guard had no choice but to continue flying the UH-1. It fully embraced the UH-1 Service Life Extension Program that sought the application of aviation technologies and equipment upgrades to make the Huey deployable for the foreseeable future.[21]

In comparison to utility helicopters, modernization of cargo and scout helicopters continued apace.

Maj. Gen. John Matthews, the Adjutant General of Utah, accepts the first AH-64 Apaches delivered to the 1-211th Aviation Attack Helicopter Regiment in 1992. *Utah National Guard*

During annual training in 1996 a UH-60 Black Hawk from Kentucky is guided in for a safe landing in an open field. *National Guard Bureau*

The presence of the rugged and reliable CH-47 became widespread. By 1995, 107 Chinooks were on hand, out of 131 required by TOE. Within two years, another twenty-four aircraft were on hand, either cascaded from active duty units or received from new production. In 1993 Mississippi was the first to take delivery of the OH-58D Kiowa Warrior, the Army's most advanced armed scout helicopter at the time.[22]

The fixed wing fleet also saw significant upgrades throughout the 1990s. Modernization resulted in the replacement of older, piston engine aircraft with faster and more capable turbine powered airplanes. 1992 was a watershed year for fixed wing modernization. A total of seventy-three C-7, T-41, OV-1 and U-8 aircraft were retired, replaced by increased numbers of C-12s, C-26s, C-23s and U-21s. The fixed wing fleet then stood at eighty-three airplanes, with a turbine powered aircraft in each state. That number stayed fairly constant for the remainder of the decade.[23]

## UH-60 Black Hawk

The UH-60 has proven itself a worthy successor to the UH-1 Iroquois as the Army's front-line utility helicopter. In this role, the Black Hawk provides air assault, general support, aeromedical evacuation, command and control, and special operations support during both combat and stability and support operations. The Black Hawk entered Army service in 1979 and went into combat for the first time in the invasion of Grenada in October 1983. It has since served with distinction in Panama, Somalia, Haiti, Bosnia, Kosovo, Afghanistan, Iraq and elsewhere.

The Black Hawk is manufactured by the Sikorsky Aircraft Corporation and has gone through several model variations, starting with the A model and through today's L model. It has a crew of four: two pilots and two crew chiefs. The internal hauling capacity is rated at 2,640 pounds, enabling the UH-60 to carry an entire squad of eleven infantrymen fully equipped. Its external hauling capacity is approximately 9,000 pounds. With a cruising speed of over 150 mph, the Black Hawk has a range in excess of 300 miles. The UH-60 has a built-in tolerance to small arms fire and most medium-caliber high-explosive projectiles. The aircraft's critical components and systems are armored or redundant to enable it to withstand multiple small arms hits, and its airframe is designed to progressively crush on impact to protect the crew and passengers in a crash.

The UH-60 first entered ARNG service in 1983. Since that time, it has become the backbone of the ARNG rotary wing aircraft fleet, both in terms of numbers and service. In addition to all of its combat capabilities, the Black Hawk has shown its versatility and reliability for state missions and domestic emergency response. This was best displayed during the rescue and response to Hurricane Katrina in 2005, when ARNG Black Hawks were essential in saving lives and providing emergency relief and supplies to storm victims all along the Gulf Coast.

The Black Hawk will continue to serve the Army aviation community for many years to come. UH-60s also serve in a number of other U.S. federal agencies. In addition, more than twenty nations fly the Black Hawk and its derivatives.

The UH-1 remained an integral part of the ARNG aircraft fleet throughout the 1990s. Guardsmen from Alaska's Long-Range Surveillance detachment rappel from a Huey belonging to the 207th Combat Support Aviation Battalion in 1996. *National Guard Bureau*

Modernization also affected the AVCRADs. Following the Persian Gulf War, the AVCRADs not only retained the mission as a mobilization augmentation to the Army's aviation depot system but assumed even wider roles. A new proposal known as AVCRAD 21 emerged which sought to transition the maintenance organizations from their existing configuration to efficient regional support centers better suited for a smaller, modern force. The AVCRAD 21 study was completed in June 1996, and the following year recommendations for reorganizing and upgrading AVCRAD functions were carried out.[24]

By the middle of the decade, a fiscal famine had descended upon the ARNG that adversely affected aviation maintenance. The Army decided no longer to pay for either certain aspects of major aircraft repairs or the replenishment of selected repair parts for the ARNG. Therefore, a principal reason for AVCRAD reorganizations was to wring every dollar possible from repair and maintenance functions. The AVCRADs focused more on component repairs and their return to the ARNG supply system, thereby avoiding costs which would be otherwise incurred from the Army wholesale supply system. AVCRADs also became parts supply managers as a cost-savings measure. They became responsible for the management of regional, authorized stockage lists, giving them control over repair parts usage at

## AH-64 Apache

Developed to replace the AH-1 Cobra, the AH-64A "Apache" entered Army service in 1984. More than a close combat fire support platform, the AH-64 was designed to conduct deep strike missions and armed reconnaissance. As an organized fighting force, Apache units serve as heavy division and corps-level attack helicopter assets. The AH-64A first entered ARNG service in the late 1980s.

The AH-64A was powered by two GR T700 turbo-shaft engines producing 1,690 hp, giving it a cruising speed of 165 mph and a range of 300 miles. With a crew of two seated in tandem, the A model was armed with a 30mm M230 chain gun with 1,200 rounds. This was connected to the gunner's helmet-mounted gun sight. In addition, the Apache carried AGM-114 Hellfire missiles and Hydra 70 FFAR unguided rockets.

The AH-64A underwent several upgrades to the D model which debuted in 1998 and is designated as the "Longbow." This variant included GPS, improved communications capabilities and more powerful T700-GE-701C engines. The Longbow Apache has a range of 300 miles and a top speed of nearly 170 mph. Its most important innovation is the radome located above the rotor blades which houses the Fire Control Radar (FCR) and the Radar Frequency Interferometer (RFI). These additions permit the Apache to hide behind terrain or structures, and by using only its dome, to locate and pinpoint the enemy, then pop up and strike without warning.

ARNG aviators have proved their skills and the capabilities of the AH-64 Longbow during close combat in both Afghanistan and Iraq.

# Brig. Gen. Alberto J. Jimenez

Brig. Gen. Alberto J. Jimenez is a distinguished citizen-soldier aviator with forty years of military service. General Jimenez has served as an aviation commander and staff officer at three levels of organization: unit, state, and NGB. He is a rated rotary and fixed-wing master aviator with more than 3,500 hours of accident-free flying.

Born in the Dominican Republic, Alberto Jimenez first fell in love with helicopters as a young boy when he saw them used in the harvesting of fruit crops. Years later, as an ROTC student in Puerto Rico, he was introduced to the UH-1. After two years of college, he enlisted in the U.S. Army in 1969, becoming a warrant officer and a rated pilot. He fought in Vietnam during 1971-1972 as an AH-1 pilot and maintenance officer with the 361st Aerial Weapons Company.

A chance encounter with a senior officer from the Puerto Rico ARNG resulted in the start of his National Guard career. After a visit to Puerto Rico, he was deeply impressed with the professionalism, maturity and experience level of the island's ARNG aviation force. As a result, he soon left active duty, becoming a member of the Puerto Rico ARNG. After nine years as a warrant officer, Alberto Jimenez received his commission as a Fort Benning OCS honor graduate in May 1978. When Hurricane David savagely struck the Dominican Republic the following year, the Aviation Section of Puerto Rico's 92nd Infantry Brigade deployed there with ten helicopters as part of an international relief effort. For their distinguished service, the Puerto Ricans were selected as AAAA's ARNG Aviation Unit of the Year for 1979.

It was during his work with the relief effort that Alberto Jimenez first caught the eye of John Stanko. Two years later, Mr. Stanko offered Jimenez a job at Edgewood. He soon joined the ARNG Aviation Division, and over the next twenty years, worked in the Aviation Logistics Office and as Chief, Systems Branch. From 1998 to 2001, he served as Chief, ARNG Aviation and Safety Division (NGB-AVS).

At the same time, General Jimenez accrued an outstanding career as a senior leader in the Maryland Guard. He served as the commander of the 29th Aviation Brigade, 29th Infantry Division (Light) during 1997-2002. After graduating from the Army War College in 2002, he served as the Chief of Staff for JFHQ-Maryland. General Jimenez is presently the Deputy Assistant TAG for the Maryland ARNG.

The C-23 Sherpa gained an outstanding reputation as a cargo hauler throughout the 1990s. *Michael Doubler*

the AASFs. The Missouri AVCRAD was the test site for the initial parts management program in 1999, and after appropriate software was installed in California, Connecticut and Mississippi, the other AVCRADs followed suit.[25]

With the modernization of the aircraft fleet and improved maintenance capabilities, it came time to upgrade the ARNG Aviation Division as well. Since the early 1970s, the division had remained stationed at Edgewood, Maryland. In 1993 the ARNG Readiness Center (ARNGRC) opened at Arlington Hall Station, Virginia, as part of a strategic plan to locate all of the ARNG Directorate's scattered offices under one roof. The opening of the ARNGRC also introduced modern information technology systems into daily staff functions, including networked computers and email. Electronic links from AASFs to the ARNGRC permitted the transmission of real-time aircraft readiness data, facilitating the early identification and resolution of readiness issues. With money in short supply, new technology resulted in more effective readiness management and efficient use of critical resources.[26]

In 1980 the Aviation Division had moved from its building on the main post at the Edgewood Area of Aberdeen Proving Ground to a new OAC location on the edge of the installation which had formerly been a Nike missile site. Building 6810 on the Edgewood OAC became the Aviation Division's home for the next thirteen years. It was an idyllic setting, surrounded by stands of forest and fields of wildflowers, which afforded easy access and facilitated staff functions. Most personnel lived nearby in rural Maryland, and with the opening of the ARNGRC, faced the prospects of a long and stressful daily commute to Northern Virginia. John Stanko and others argued for leaving the division at the Edgewood OAC, but to no avail. After a stay of more than twenty years, the Aviation Division's doors at Edgewood finally closed for the last time in mid-1993. The division moved to its new home on the third floor, west wing of the ARNGRC. Concurrent with the move came the end of John Stanko's long leadership tenure. Col. Ron Rendy, an Oregon aviator, served briefly as division chief. Col. Joe Ferreira, New York's SAAO, became the next, long-serving division chief.[27]

Three years later, the organization was renamed the ARNG Aviation and Safety Division (NGB-AVS) to place more emphasis on its responsibility as the lead staff agency for the entire ARNG safety program. Restructuring soon followed that further refined staff functions. The mission of NGB-AVS remained unchanged: to manage the allocation and distribution of resources to the ARNG aviation community for

Building 6810 at the Edgewood Area operating activity center (OAC) in Maryland housed the ARNG Aviation Division from 1980 until 1993. *Michael Doubler*

The ARNG Readiness Center (ARNGRC) at Arlington Hall Station in Arlington, Virginia. The ARNGRC became the new home of the Aviation Division starting in 1993. *ARNGRC*

the accomplishment of state and federal missions. Four distinct branches acted to carry out the NGB-AVS mission. The Operations and Training Branch, the Aviation Systems and Logistics Branch, the Safety and Occupational Health Branch, and the Aviation Programs Integration Branch all worked to maximize unit readiness by providing regulatory interpretation, programs funding, individual training seats, logistics oversight, and safety and occupational health programs. In addition, the Multi-Media Branch at Fort Rucker continued to provide instructional materials for the entire ARNG aviation force.[28]

## Domestic Missions in the 1990s

ARNG aviation continued to respond to local disasters and support law enforcement following the Persian Gulf War. However, larger regional disasters required new emergency response procedures. The modernization strategy which left the ARNG with fewer numbers of more capable aircraft seemed justified in light of actual operations. At the same time, larger emergencies required the quick concentration of aviation assets, not only within a single state, but across state lines as well.

The largest single commitment of National Guard assets to a natural disaster came early in the decade. On August 23, 1992, Hurricane Andrew slammed into south Florida, causing the most extensive property damage of any storm in U.S. history until that time. More than 6,000 Guardsmen on state active duty rushed in after the storm passed to help restore order and prevent looting. After the extent of damage became apparent, the Regular Army deployed 20,000 troops to the region to provide shelter, medical care, food and water.

The largest call-up of Florida Guardsmen since World War II included a substantial aviation component. Personnel and aircraft comprised an emergency response force that included sixteen UH-1, two UH-60 and four OH-58 aircraft. After Hurricane Andrew passed, one of aviation's first missions was to take Governor Lawton Chiles and the TAG, Maj. Gen. Ronald O. Harrison, on an aerial reconnaissance of the ravaged region. Roads choked with debris and downed power lines made ground movement nearly impossible, so the first rescue and relief efforts came by air. In the first days, aerial missions included the delivery of food and water, the transport of doctors and nurses, and the evacuation of the most severely injured. Wherever dazed survivors of Hurricane Andrew were huddled together in large numbers on the ground, an ARNG helicopter landed to provide relief and to assure victims that more help was on the way. The acute disaster resulted in almost seventy civilian helicopters operating over the region, making for very crowded airspace. ARNG pilots relied on their training, experience and standardization procedures to avoid midair collisions and damage from ground debris.[29]

As other state and federal agencies arrived, Florida Guardsmen on state active duty became more involved in aiding law enforcement. Hurricane Andrew had damaged the Miami Dade Metro Police's fleet of helicopters, so Florida ARNG OH-58s filled the gap. For the first time, Kiowas used their thermal imaging systems during the hours of darkness in a law enforcement role. Aviators assisted police in the recovery of stolen vehicles , the high speed pursuit of

various offenders, and in the investigation of robberies, burglaries and shootings. When it was all over, the best evaluation of the performance of aviation personnel came from Col. David Adkison, Florida's SAAO: "Our success was due in large part to their safety awareness and total professionalism."[30]

The magnitude and scope of the rescue and recovery efforts in Florida wrought new, significant change in disaster response capabilities. In anticipation of another major disaster, one perhaps even larger than Hurricane Andrew, the southern governors banded together to enact new administrative procedures for disaster response. The Emergency Management Assistance Compact (EMAC) removed fiscal and legal impediments to the speedy transfer of Guard personnel and equipment across state lines in order to expedite rescue and recovery efforts in a crisis. The EMAC network eventually spread across the entire country, with the last state joining in 2005.[31]

Other significant disasters resulted in the call-up of Guard aviators. When the upper Mississippi produced a widespread flood of biblical portions in 1993, ARNG aviation units throughout the Midwest responded by plucking stranded inhabitants from rooftops and delivering emergency aid and supplies during 3,500 flight hours. In January 1994 a powerful earthquake centered on Northridge, California, shook that state's entire southern region. ARNG aviation transported supplies and critical health, safety and security personnel, moving 5,300 passengers and 87,000 pounds of cargo during relief operations. When Hurricane Floyd struck the East Coast in September 1999, damage was particularly severe in eastern North Carolina. The state pressed every ARNG helicopter into service, except its Apaches. In a clear demonstration of the new EMAC system, Black Hawks from Tennessee, Georgia and Florida immediately rushed to North Carolina to assist in rescue and recovery efforts.[32]

The most challenging domestic mission that ARNG aviators faced was battling persistent, widespread wildfires. Drought conditions, increased urbanization, and large tracts of uncleared forests and brush produced ideal conditions for wildfire tinderboxes. Hot temperatures, strong winds and low humidity further fed the flames. Careless campers set some wildfires—even arsonists ignited a few—but the most common form of combustion was summer lightning.

A Nebraska UH-60 on duty in California lifts a bucket to dump water on wildfires. The special markings are mandated by the U.S. Forest Service for safety purposes. *Nebraska National Guard*

Wildfires were especially acute in the American West, where state-to-state transfers of ARNG personnel and helicopters became routine. In 1994 the ARNG aided significant firefighting operations in Arizona, California, Colorado, Idaho and Washington. UH-60s and CH-47s carried large 1,000 or 2,000-gallon buckets of water dipped from local lakes or reservoirs to douse the raging fires. Helicopters routinely lifted firefighters from their base camps to the very edge of fire zones. The year 2000 was the nation's worst wildfire season in fifty years. Army troops and Marines pitched in alongside National Guard personnel to battle colossal wildfires in Montana, California and several other states. In California, Black Hawks and Chinooks helped to bring fires under control with water drops. As a rule, pilots avoided flying directly over fire zones, but smoke, winds and ashen cinders always kept them on their

toes. Long hours and the seriousness of the situation added to the stress. "No one is shooting at you, but it's still a lot like combat," observed Chief Warrant Officer Randy Weatherhead, a California Guardsman who had flown helicopters in Vietnam.[33]

An OH-58 Kiowa RAID aircraft on duty along the Southwest border shows added enhancements for law enforcement purposes, including higher landing skids, a cable cutter and a FLIR pod. Virginia RAID crews adopted the patch at insert for wear. *Virginia National Guard*

Widespread drug usage remained a major social concern, and the ARNG's role in counter-drug operations expanded dramatically during the 1990s. Congress earmarked hundreds of millions of dollars for National Guard counter-drug operations, including aviation participation. In 1992 the ARNG Aviation Division organized special Reconnaissance and Aerial Interdiction Detachments (RAID) in selected states. RAIDs were separate units whose primary mission was drug interdiction and direct support to law enforcement. RAID air crews received special training at the WAATS on distinctive flying and observation skills. In 1993 ARNG aviators flew 46,000 hours during counter-drug missions. Overall, the national RAID fleet came to include approximately one hundred OH-58s and a scattering of CH-47s that were augmented when needed by UH-60s and UH-1s from other flying units.[34]

In all, thirty-two RAID teams were organized, and the states were given wide latitude in their composition based on available equipment, expected missions and other local conditions. Trained pilots and observers flying the OH-58 were on the cutting edge of drug eradication with their ability to spot marijuana crops, and technology allowed them to do so even in reduced visibility conditions. RAID teams and their missions evolved over time. While drug eradication remained their primary purpose, other missions included criminal manhunts, surveillance, and search and rescue. RAID aircraft were often modified to include police-based avionics, high skids, and forward-looking infrared (FLIR) systems. When not flying, full-time RAID personnel participated in drug demand reduction programs in schools and assisted in organizing local public events, activities that also served as National Guard recruiting opportunities.[35]

## Training Enhancements

Despite downsizing, training demands remained high, especially in light of aircraft modernization and the reorganization of units. As a result, the Army Guard turned even more to its existing regional training sites to meets its needs. Furthermore, additional training sites and

Crown Prince Abdullah bin al-Hussein, future King Abdullah II of Jordan, trained with Pennsylvania ARNG aviators at EAATS in the early 1990s. Its growing reputation as a world-class training facility brought many allied personnel to EAATS for training. *Pennsylvania National Guard*

agencies were organized to meet the needs of the Army and the ARNG.

The curriculum for EAATS changed considerably, reflecting the training challenges of the 1990s. The UH-1, CH-54 and OH-6 had filled the ramp at Fort Indiantown Gap for years: the UH-60 and CH-47 now replaced them. At the same time, EAATS retained the mission of continued instruction on the aging Huey. The student population changed dramatically as well, with an expansion in training programs for enlisted men and women, especially helicopter repair personnel. Enlisted specialty training at Fort Indiantown Gap permitted the ARNG to slash costs associated with sending citizen-soldiers to active duty installations. The staff expanded to include qualified flight surgeons to administer required physical examinations. Allied students flocked to south, central Pennsylvania to receive instruction on a new generation of advanced helicopters. By the end of the 1990s, EAATS had transitioned from an ARNG regional training site to a world-class aviation instruction facility with global reach.[36]

The WAATS experienced change as well. All instruction for attack helicopters—AH-1and AH-64 alike—shifted to the WAATS during the decade with corresponding increases in the faculty and curriculum. An entirely new mission surfaced to conduct the initial field training for ARNG aviators committed to counter-drug operations. Flying at night using NVGs, crew members were instructed on the use of sophisticated night detection devices and the coordination of as many as six radios netted with law enforcement agencies. Instructors and students at Gunfighter University maintained a perfect safety record throughout, despite the high-risk nature of the training involved. Like the EAATS, the WAATS added a medical staff to administer flight physicals.[37]

Student pilots at HAATS negotiate the high, vertical terrain of Colorado during instruction in high-altitude flight operations. *NGB-AVS*

The Army Guard organized two new regional training sites in the 1990s. The High-Altitude ARNG Aviation Training Site (HAATS) located at Eagle County Airport in Gypsum, Colorado, was established in 1992 as a rotary wing mountain training site. HAATS was considered a "graduate level" flight training site that taught students the optimal use of power management in hostile, high-altitude environments. Operating at ceilings from 6,500 to 14,000 feet, helicopter crews learned to master the high-altitude environment while overcoming the hazards of difficult and isolated vertical terrain.[38]

The WAATS continued to grow its curriculum and physical plant at Marana, Arizona, throughout the 1990s. *Michael Doubler*

EAATS had started as the proponent for ARNG fixed wing training. However, that mission passed to the new Fixed Wing ARNG Aviation Training Site (FWAATS) at Clarksburg, West Virginia, which specialized in individual training for modern fixed wing aircraft. In addition, FWAATS conducted instructor qualification, instrument examiner and standardization training, and flight-engineer qualification courses for the C-12, C-26 and C-23. Annual student loads ranged from 200 to 300 personnel each year, with flight simulators supporting all courses of instruction and training requirements.[39]

Retired but still involved. John Stanko (left) and Bill Badger (right) visit during a change-of-command ceremony at WAATS in the late 1990s. *WAATS*

A new, major command was added to the ARNG aviation community on October 2, 1995, with the activation of the Operational Support Airlift Agency (OSAA). Located at Davison Army Air Field at Fort Belvoir, Virginia, OSAA was one of the Army's first multi-component units, including both active duty and ARNG personnel. Like many of the measures enacted in the 1990s, OSAA was formed to eliminate redundancies and save money by streamlining the administration and functioning of the Army's dispersed fleet of administrative support aircraft. In the beginning, OSAA had tasking authority over seventy-six Army fixed wing aircraft located at seven regional flight centers. As part of NGB, OSAA assumed responsibility for all day-to-day operational support airlift missions for the entire Army within CONUS and in Alaska, Hawaii, Panama, Puerto Rico and the Virgin Islands.[40]

By the end of the decade, OSAA had full responsibility for the management, oversight and execution of the Army's operational support airlift program. In addition, it was the proponent agency for policies affecting ARNG fixed wing aviation. OSAA had tasking authority over seventy-three flight detachments and regional flight centers located within CONUS and overseas, including the FWAATS. On a daily basis, OSAA aircraft transported senior Defense Department and Army personnel as well as materiel. In 1999 alone, OSAA flew 53,948 hours, transporting 87,590 passengers and 1.1 million pounds of cargo. A variety of fixed wing aircraft were in service, including C-12, C-23 and C-26 turboprop airplanes and UC-35, C-20 and C-37 turbojets. OSAA was not limited to administrative support, and occasionally took part in joint training exercises and humanitarian relief operations. When Hurricane Mitch devastated parts of Central America in 1999, OSAA aircraft deployed to the region to transport engineering equipment, medical teams and senior government officials.[41]

Reduced funding for the flying hour program and further cuts in flight-training periods aimed at ensuring combat readiness and aviator proficiency and safety became major readiness inhibitors as the 1990s progressed. By 1997, the Army resourced ARNG aviation training programs at only 75 percent of their most basic need. A natural

As defense budgets tightened in the 1990s, aircraft simulators became more important than ever in maintaining pilot proficiency and tactical skills. *Michael Doubler*

The instrument panel of an AH-64 simulator at WAATS. *Michael Doubler*

response to decreased training dollars was for the ARNG to rely more than ever on flight simulators.[42]

One of the great training innovations of the period was the Aviation Reconfigurable Manned Simulator (ARMS) which was the brainchild of ARNG aviation experts. ARMS was a high fidelity, no-motion based simulator that exploited existing commercial and government off-the-shelf technology and could be reconfigured to correspond to each type of rotary and fixed wing aircraft. The Army enthusiastically adopted the ARMS, renaming it the Aviation Combined Arms Tactical Trainer (AVCATT). Each AVCATT included six crew stations that could be outfitted with the flight controls and instrumentation for the desired type of aircraft. Great advantages of the new simulator were that it exposed aviators to individual and crew training tasks and included scenarios for collective, combined arms and joint training exercises. The AVCATT prototype was successfully demonstrated in early 1997 and integrated into training by November. In a period of tight money, AVCATT provided flight crews the critical training they required without the inherent risks and expense of aircraft operations.[43]

## Peacekeeping Missions

A major segment of U.S. military actions overseas throughout the 1990s were peacekeeping and humanitarian support operations intended to bring peace and stability to war-torn regions. Wherever American troops ventured, citizen-soldiers went there as well, including aviators. Between 1994 and 1999, approximately 13,400 Guardsmen served on extended tours overseas as peacekeepers.[44]

Peacekeeping efforts following the Persian Gulf War got off to a rocky start. The downing of two Army Black Hawk helicopters in Mogadishu, Somalia, in October 1993, showed the limits of American power against determined, local guerillas. Guard aviators were among the peacekeepers dispatched to the Horn of Africa. In February 1994, an ARNG security assistance team went to Somalia to help in the handoff of the peacekeeping mission to other allied troops who were operating older equipment. State aviators trained Pakistani pilots, as well as maintenance and armament specialists, on the AH-1 Cobra. A team from Missouri's 1107th AVCRAD also deployed to Somalia to shrink-wrap U.S. helicopters for shipment home at the end of the American commitment in May 1994.[45]

An Alaska maintainer from the 1-207th Aviation prepares a UH-60L Black Hawk for operations during the unit's deployment to Haiti. Among the work performed by members of the 207th was assisting the local population in recovery projects from the effects of Hurricane Jeanne which had struck the island. *U.S. Navy*

A second episode of peacekeeping came much closer to home. In 1994 the Clinton administration moved to restore the legitimate government of Haiti which had been overthrown in a coup. A large, U.S. joint task force assembled off Haiti's coast, however last minute negotiations averted a full-scale invasion. American forces finally rushed in without firing a shot to restore order in a country wracked by anarchy.

At first, ARNG units ordered to active duty were composed wholly of volunteers to backfill Army units sent from CONUS to Haiti. As the peacekeeping effort increased, citizen-soldiers finally deployed to the Caribbean. The ARNG provided aviation support there with rotations of flight detachments from Louisiana, Maryland and Michigan. Starting in February 1995, Guard pilots flew transport and observation missions while support personnel performed maintenance and air traffic control functions. Contact teams from Missouri's 1107th and California's 1106th AVCRADs deployed to Haiti in early 1995 to shrink-wrap Army helicopters returning stateside.[46]

Members of Missouri's 1107th AVCRAD shrink wrap an AH-1F Cobra belonging to the 10th Mountain Division for return shipment back to New York from Haiti in 1995. *National Guard Bureau*

The largest, sustained deployment of peacekeepers came in the troubled Balkans where open warfare, including horrible atrocities and ethnic cleansing, finally forced an international intervention. The Dayton Peace Accords brought an end to hostilities in late 1995. With the signing of the treaty, the United States committed ground troops as peacekeepers. From the very beginning, ARNG personnel served in the Balkans. In 1996 just over 2,000 citizen-soldiers deployed, and the following year that number jumped to almost 3,500, a level of commitment that remained near constant in the following years. Repeated iterations of peacekeepers became known as the Stabilization Force (SFOR).

A flight of ARNG UH-60s over the Balkans as part of the NATO peacekeeping effort in the region. ARNG aviation has had a presence in the Balkans since 1996 which continues to the present. *Wisconsin National Guard*

The first ARNG aviation units dispatched were maintainers; contact teams from both the 1107th and 1109th AVCRADs and a MACE cell to provide command and control. The first full ARNG aviation unit sent to the Balkans was Wisconsin's 832nd Medical Company (AA). In August 1997 sixty-five aviators journeyed to Macedonia to lend support to active duty peacekeepers on the troubled Macedonian-Serbian border. The next year, California's 126th Medical Company (AA) sent aircraft and personnel to Bosnia for 270 days. Throughout 2000, two ARNG AA companies sequentially provided aerial support in the region; Maine's 112th followed by Oregon's 1042nd.[47]

The largest single commitment of ARNG aviators to the SFOR occurred in 2000 with the deployment of the 49th Aviation Brigade. Integrated with troopers from the Army's 3rd ACR, the 49th Aviation Brigade served at Comanche Base, Bosnia. The brigade's members included ARNG aviation volunteers from Texas, Arkansas, Arizona, Pennsylvania and Maryland who were integrated at every level of command. The main

Black Hawks of the 1-147th Aviation from Wisconsin land at Camp Bondsteel, Kosovo, as part of the NATO peacekeeping mission that started there in 1999. *Wisconsin National Guard*

task was the repeated performance of reconnaissance and security missions to create a safe and secure environment for the return of displaced persons and to promote humanitarian missions. The primary lesson from the deployment was that standardization and common doctrine within the Army aviation community allowed "rapid and effective team building" among Regulars, Guardsmen and Reservists.[48]

Citizen-soldier aviators regularly went overseas for major, joint training exercises. Such deployments to potential trouble spots strengthened ties with regional allies and signaled America's commitment to peace and security. Following the Persian Gulf War, deployments to the Middle East took on great significance. Guard aviators learned to operate in a region known for its harsh weather, forbidding terrain and extreme temperatures. They also renewed friendships with coalition military flyers from Egypt, Saudi Arabia and other Arab countries that they had met at CONUS training sites.

A flight of Black Hawks from Task Force 130 skim over the Persian Gulf off of Kuwait in 1998. This composite unit was composed of ARNG aviators from North Carolina, Florida and Alabama. They flew missions supporting the enforcement of the No-Fly Zone over southern Iraq. TF 130 was the first ARNG combat aviation unit to deploy as part of this effort. *National Guard Bureau*

Guard aviators routinely took part in Bright Star joint exercises, the annual deployment of U.S. forces to Egypt. The high point of ARNG aviation's participation in Bright Star came in October 1995. Florida's 1-111th Aviation, an Apache battalion, deployed to Egypt to complement the training of the 24th Infantry Division. Over a two-week period, the 1-111th conducted affiliation training with other attack helicopter battalions from Egypt, the UAE and France. Acting under the 1-111th's command, a coalition battalion banded together to plan, rehearse and execute deep attack missions and to conduct live-fire exercises. The high point of the deployment came during major, joint exercises in support of the 24th Division in northern Egypt. For its outstanding performance during Bright Star, the 1-111th was selected as AAAA's ARNG Aviation Unit of the Year for 1995.[49]

In the aftermath of the Persian Gulf War, the Kuwaitis had agreed to the prepositioning of unit sets of equipment at desert storage sites in order to facilitate the rapid return of U.S. troops to the region. From positions in Kuwait, American forces could defend against another direct assault from Iraq or respond to other provocations from Saddam Hussein. At the same time, coalition air and naval forces maintained United Nations mandated no-fly zones over southern and northern Iraq. To maintain familiarity with the region's geography and weather, and to hone rapid response skills, American combat brigades deployed to Kuwait on a regular basis.

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ARNG maintainers assigned to Task Force Panther in Kuwait load ammunition into an AH-64 Apache in support of Operation Desert Fox in 1999. *National Guard Bureau*

to facilitate the rapid return of U.S. troops to the region. From positions in Kuwait, American forces could defend against another direct assault from Iraq or respond to other provocations from Saddam Hussein. At the same time, coalition air and naval forces maintained United Nations mandated no-fly zones over southern and northern Iraq. To maintain familiarity with the region's geography and weather, and to hone rapid response skills, American combat brigades deployed to Kuwait on a regular basis.

ARNG aviation units became an integral part of deployments to Kuwait starting in 1998. Task Force Panther was the first to deploy there, consisting of parts of North Carolina's 1-130th Aviation and 130th Maintenance Company, Florida's Company E, 111th Aviation (Air Traffic Services), and detachments from Alabama's 1-131st Aviation and Maine's Company E, 128th Aviation Battalion. Task Force Panther included 171 citizen-soldiers who operated eight AH-64s and four UH-60s. For five months, the Guardsmen conducted training and helped in the enforcement of the southern Iraq no-fly zone.[50]

Other ARNG aviation task forces soon deployed to Kuwait. Task Force Cougar, composed of elements of South Carolina's 1-151st Aviation, Mississippi's 1-185th Aviation and Minnesota's Company G, 147th Aviation (Air Traffic Services), arrived in Kuwait in late 1999, serving through the passing of the new millennium. In August 2000, the 1-111th from Florida and Montana's 1-189th Aviation pulled a tour of duty there. Army ground forces conducted a series of deployments to Kuwait in 2001 dubbed Operation Desert Spring. The ARNG provided numerous iterations of UH-60s to support the maneuvers. Wisconsin's 1-147th Aviation, with a subordinate Black Hawk unit from Indiana, was on duty in Kuwait when the shocking news arrived that the U.S. homeland had been the target of a massive terrorist attack.[51]

At the close of the year 2000, ARNG aviation was a smaller, but modernized force, fully engaged in contingency and humanitarian support missions overseas. Global deployments proved that ARNG aviation could sustain an overseas presence in peacetime as part of an operational force. State missions were a priority as well, with aviators responding to major disasters at home and supporting law enforcement in counter-drug operations. By any measure, it seemed as though ARNG aviation had not only survived the austere 1990s but had made significant gains in modernization and training. What no one knew at the time was that ARNG aviators from all across the nation would soon be engaged in another major war against a new and dangerous foe emanating from the Middle East.

[1] NGB, *Annual Review*, 1990, 29-30.

[2] Capt. Les Melnyk, *Mobilizing for the Storm: The Army National Guard in Operations Desert Shield and Desert Storm* (Arlington, VA: National Guard Bureau, Historical Services Division, 2001), 1-14, 53; Maj. Lawrence E. McKinley, "Response to request for Unit Data for Operations DESERT SHIELD/STORM After Action Review," 986th Medical Detachment AA, Virginia National Guard Historical Collection, Fort Pickett, VA, 1; and NGB, *Annual Review*, 1991, 37.

[3] Capt. John J. Bautisia, "NGB and the Minuteman Express," *Army Aviation*, May 31, 1991, 42-43; Maj. Jean Marie Beall, "C-23B Sherpas Take Flight as Minuteman Express," *National Guard*, August 1991, 44; and NGB, *Annual Review*, 1990, 31.

[4] Bautisia, "Minuteman Express," 44-46; and NGB, *Annual Review*, 1991, 36-37.

[5] Melnyk, *Mobilizing for the Storm*, 14, 44-54.; and Col. Edward K. Jefferds and Col. Shirley L. Jones, "The Medical Units of the Army National Guard (ARNG) and Operation Desert Shield/Desert Storm," *The Journal of the U.S. Army Medical Department*, March/April 1992, 22.

[6] Melnyk, *Mobilizing for the Storm*, 44-54; 1st Lt. Richard E. Rudd and Maj. Robert J. Felderman, *History of the 1187th Medical Company (Air Ambulance) Mobilization and Deployment for Operation Desert Shield –Operation Desert Storm, November 1990-June 1991*, unpublished manuscript, Iowa Gold Star Museum, Johnson, IA, 1992, 66-67; and CW2 Victor E. Carlin, "Operations in the Desert: A Postscript," *U.S. Army Aviation Digest*, November/December 1992, 26.

[7] John Seitz and Theodore S. Silva, *United States Army Reserve in Operation Desert Storm, Installation Operations: The Role of USAR Garrisons* (Washington, DC: Headquarters, Department of the Army, August 1, 1994), 10, 29-30; and Rudd and Felderman, *History of the 1187th Medical Company*, 67.

[8] Sgt. Jen Deselms, "Caught Up in The Storm," *National Guard*, January 1992, 54-56; McKinley, 986th Medical Detachment AA, 4; and "Desert Storm Unit Awards-Medical/Hospital Units," Brooke Army Medical Center, located at http://www.3ad.org/desertstorm/ awards_badges/ds_award_medical.htm.

[9] Melnyk, *Mobilizing for the Storm*, 50; and "Home From The Storm," *Virginia Guardpost*, Spring 1992, 9.

[10] "1109th Aviation Classification and Repair Depot (AVCRAD)," May 23, 2005, located at http://www.globalsecurity.org/military/agency/1109avcrad.htm; and Maj. Gen. Donald R. Williamson, "AVSCOM: A Desert Storm Overview," *Army Aviation*, March-April 1991, 17.

[11] Mst. Sgt. Chester G. Spangler, "Army Air Traffic Services During Operations Desert Shield/Desert Storm," *U.S. Army Aviation Digest*, May/June 1993, 60-64; and, Capt. Ricky Trayah, telephone interview conducted by John Listman, June 18, 2009.

[12] NGB Survey, "ARNG Deaths on Active Duty for Operations Desert Shield/Desert Storm, 1990-1991," compiled by CW2 John Listman, NGB Historical Services Division, 1998.

[13] Brig. Gen. Alberto Jimenez, interview with the author, Baltimore, MD, July 30, 2009.

[14] Army Aviation Warfighting Center, "Aviation Restructure Initiative: Modernizing for the Future," information briefing, Fort Rucker, AL, May 1993, 1-7.

[15] Maj. Gen. John R. D'Araujo, Jr., "Off-Site Agreement," informal memorandum, October 25, 1999, 1-4.

[16] NGB, *Annual Review*, 1993, 60-61.

[17] Ibid.; and ARNG Aviation Division, "By-State Comparison of ARI Restructure Crosslevel Effect," information briefing, 1994, New York and Alabama charts.

[18] NGB, *Annual Review*, 1993, 61; and NGB, *Annual Review*, 1996, 55.

[19] NGB, *Annual Review*, 1992, 45.

[20] NGB, *Annual Review*, 1994, 60; and NGB, *Annual Review*, 1995, 58.

[21] Ibid.

[22] NGB, *Annual Review*, 1993, 60; and NGB, *Annual Review*, 1995, 58.

[23] NGB, *Annual Review*, 1992, 46.

[24] NGB, *Annual Review*, 1996, 56; and Mr. Al Marshall, "AVCRAD 2020 Implementation Plan," information paper, April 29, 2009, 1-2.

[25] NGB, *Annual Review*, 1996, 56; and NGB, *Annual Review*, 1999, 66.

[26] NGB, *Annual Review*, 1998, 51.

[27] Brig. Gen. Jimenez, interview.

[28] NGB, *Annual Review*, 1996, 55; and NGB, *Annual Review*, 2001, 72.

[29] Maj. Thomas G. Petrick, "Hurricane Andrew and the Florida ARNG Aviation Relief Mission," *Army Aviation*, May 31, 1993, 60-63.

[30] Ibid.

[31] NGB, ARNG Directorate, "Status of Interstate Compacts," information paper, December 3, 2002, 1-2.

[32] NGB, *Annual Review*, 1993, 60; and "Picking Up After Floyd," *National Guard*, October 1999, 18-21.

[33] NGB, *Annual Review*, 1994, 62; and "Joining the Firefight," *National Guard*, September 2000, 95, 97.

[34] NGB, *Annual Review*, 1992, 45; and Ruppert Baird, "RAID: The National Guard's Unknowns," *U.S. Army Aviation Digest*, November 30, 2001, 18-19.

[35] Baird, "RAID: The National Guard's Unknowns," 18-19.

[36] Col. Kenneth O. Boley, "Eastern ARNG Aviation Training Site Poised for the 21st Century," *U.S. Army Aviation Digest*, January/February 1995, 12-13; and Cmd. Sgt. Maj. Jeff Culp, "Enlisted Training Program at the Eastern Army National Guard Aviation Training Site," *U.S. Army Aviation Digest*, November/December 1994, 48-49.

[37] "Western Army National Guard (ARNG) Aviation Training Site," *U.S. Army Aviation Digest*, January/February 1995, 11.

[38] Maj. Gen. John M. Curran, "ARNG Aviation Training," *Army Aviation*, November 30, 2001, 6, 8, 31.

[39] Ibid.

[40] NGB, *Annual Review*, 1996, 57.

[41] NGB, *Annual Review*, 1999, 67-68.

[42] NGB, *Annual Review*, 1997, 56.

[43] Ibid.; and NGB, *Annual Review*, 1995, 59.

[44] NGB, ARNG Mobilization Readiness Division, "The Army National Guard in Stability and Support Contingency Operations," information paper, February 17, 2000, 1-9.

[45] NGB, *Annual Review*, 1994, 60.

[46] Ibid.; NGB, *Annual Review*, 1995, 29; NGB, *Annual Review*, 1996, 26; and "Wrapping Up 'Democracy'," *On Guard*, May 1995, 4.

[47] "President Clinton Calls Up Guard Units for Bosnia," *National Guard*, January 1996, 14; "Guard Troops Get the Ball Rolling in Europe and Bosnia," *National Guard*, February 1996, 14; "DoD Announces More Army Guard Units for Operation Joint Guard," *National Guard*, February 1997, 9; NGB, *Annual Review*, 1998, 51; and NGB, *Annual Review*, 2000, 60.

[48] Col. John Braun, "TX ARNG + 3ACR = SFOR 7 Success," *Army Aviation*, November 30, 2000, 35-37.

[49] Chief Warrant Officer Kenneth Bording, "Bright Star '95," *Army Aviation*, July 31, 1996, 51-53.

[50] "Aviators Return After Historic Kuwait Mission," *National Guard*, March 1999, 94.

[51] NGB, *Annual Review*, 1999, 65; and NGB, *Annual Review*, 2000, 60.

# CHAPTER FIVE

## THE GLOBAL WAR ON TERRORISM, 2001-2008

Starting with the attacks of September 11, 2001, America's new global war on terrorism saw the ARNG aviation force come of age. In past conflicts, ARNG aviation had provided limited capabilities during federal mobilizations rather than an all-out effort. For the first time, the Army called upon citizen-soldiers to perform a full spectrum of aviation operations across all mission areas during the struggle against terrorism, including attack, observation, cargo and utility. As a result, ARNG aviation became a full partner in the Army aviation war effort, receiving unprecedented levels of resources.

During overseas combat operations, ARNG aviators proved second to none in closing with and destroying America's enemies. In Afghanistan, attack battalions at first provided accurate and timely fire support to ground troops. Later, cargo and MEDEVAC missions became more essential. The war in Iraq saw ARNG aviators engaged from the start. At the height of Operation Iraqi Freedom (OIF), the first ARNG combat aviation brigade responsible for all activities within its assigned area of operations saw action. As active duty forces withdrew from peacekeeping efforts, ARNG aviators took up the slack in the Balkans and elsewhere. In all theaters, ARNG maintenance personnel kept fixed and rotary wing aircraft flying.

Col. Paul Kelly at the gunner's window of a Virginia ARNG UH-60 during a flight over Manhattan in August 2001. Colonel Kelly and the World Trade Center were both taken by terrorists. *NGB-AVS*

Homeland security missions placed additional demands on the aviation force, particularly in defense of the nation's borders. Normal state missions continued as well, with aviators responding to wildfires and floods. The National Guard's greatest response ever to a natural disaster occurred in 2005 when Hurricane Katrina ravaged New Orleans and the Gulf Coast region. All the while, the ARNG aviation force continued its march toward becoming a more capable and modernized force.

### The Attacks of 9/11 and Homeland Security

ARNG aviation's first loss in the war on terrorism came with the attacks of September 11, 2001. Chief Warrant Officer 5 William S. Ruth of Maryland was among the 184 victims killed when American Airlines Flight 77 with hijackers at the controls slammed into the Pentagon. A quiet, unassuming man, Chief Ruth had been a dedicated military aviator for most of his adult life. As a Marine Corps pilot, he had flown MEDEVAC missions in Vietnam. Afterwards, he joined the Maryland ARNG. He went to war a second time in 1990-1991, serving with the 29th

CW5 William R. Ruth was killed when American Airlines Flight 77 hit the Pentagon on the morning of September 11, 2001. Ruth had flown MEDEVACs in Vietnam and served ten years as a pilot in the Maryland ARNG before his assignment to the Pentagon. *Maryland National Guard*

Air Traffic Control Group in the Persian Gulf. Later he flew with Maryland's 104th Medical Company (AA) at Aberdeen Proving Ground. Chief Ruth logged more than 3,500 hours in helicopters and in excess of 500 hours in fixed wing aircraft during his career. A retired school teacher, he had just begun an Army personnel assignment at the Pentagon when he was killed.[1]

The surprise attacks on September 11 immediately affected ARNG aviation in a number of ways. In New York City and the surrounding area, helicopters aided first responders attempting to rush personnel and equipment to the World Trade Center site. At the Pentagon, ARNG helicopters from the District of Columbia, Maryland and Virginia participated in varying degrees in rescue and recovery efforts. In Pennsylvania, Governor Tom Ridge called upon the National Guard to get him quickly to the crash site of United Flight 93 near Shanksville; the governor soon arrived there aboard a Pennsylvania CH-47.

The shutdown of American airspace that began on September 11 and lasted for several days affected ARNG aviation. As a rule, all flight operations were frozen. In some cases, ARNG helicopters on cross-country flights were suddenly ordered to land at unexpected locations. Other crews who had completed assignments at training and maintenance sites were preparing to return to their home stations when orders came holding them in place. Returning aircraft and personnel to their point of origin over the next few days presented unique challenges but was eventually accomplished. In contrast, the emergency resulted in the launch of a number of OSAA sorties. The shutdown of the commercial aviation system stranded key civilian and military senior leaders domestically and abroad, and OSAA dispatched aircraft to return the most senior personnel to their normal place of duty. In one case, an OSAA flight delivered a human organ for a lifesaving transplant operation scheduled in Texas.[2]

Governor Tom Ridge dismounts from a Pennsylvania ARNG CH-47 on the afternoon of September 11, 2001, to view the scene of the impact of United Flight 93 that had crashed near Shanksville, Pennsylvania, earlier that day. *Pennsylvania National Guard*

In the days following 9/11, ARNG aircraft continued to play a vital role in recovery efforts in New York City. Without waiting for requests, the surrounding states offered helicopters, personnel and equipment to the New York National Guard. By September 14, the New York ARNG had twenty-eight rotary and fixed wing aircraft supporting recovery efforts in lower Manhattan. Three neighboring states—Connecticut, Maine and New Hampshire—sent a composite fleet of seventeen UH-1s, UH-60s and CH-47s to assist, half of them air ambulances. Typical missions during the recovery period, which lasted until November, included the movement of key

personnel and supplies and the shuttling of security forces between police and port authority checkpoints. On 9/11 New York was not a member of the EMAC network but did become a signatory only weeks after the terrorist attack.[3]

As the war on terrorism got underway, the first deliberate commitment of ARNG aviation occurred within CONUS. Active duty forces were either deploying to Afghanistan or preparing to do so, and additional resources were needed for installation support. The first ARNG aviation unit ordered to active duty for the war on terrorism was Iowa's Company D, 109th Aviation which provided base support at Fort Campbell, Kentucky. Over the following year, a total of ten flying or aviation maintenance units entered active duty to provide base support at several CONUS bases. The base support list eventually expanded to include the National Training Center at Fort Irwin, California, the Joint Readiness Training Center at Fort Polk, Louisiana, and the Army's European Combat Training Center at Hohenfels, Germany. The effort for 2004 was fairly typical of the period, with ARNG aviation providing thirty-two UH-1s and UH-60s and 260 personnel.[4]

While other Army Guard aviation units nationwide received mobilization orders for Afghanistan and Iraq, still others became involved in homeland security missions. Aviation's role in the counter-drug war and periodic support to law enforcement made for an easy transition to homeland security missions. A frequent homeland security task was to assist federal agencies in beefing up security along the nation's borders.

ARNG aircraft became frequent participants in homeland security missions. A UH-1 patrols the border near San Diego, California, with Border Patrol agents on board. *U.S. Army*

A direct use of National Guard aviators for homeland security purposes occurred during Operation Winter Freeze, November 2004-January 2005. During that period, law enforcement and the U.S. Border Patrol believed there was an increased possibility of terrorist operatives entering the country from Canada. A task force headed by Brig. Gen. Thomas Shailor from the Vermont National Guard organized quickly in support of the Border Patrol with the mission of conducting active surveillance missions. The Guard's primary assignment was to detect, deter, and monitor suspicious activities along a wide swath of the border between New England and Canada.[5]

During the three-month operation, nearly 250 Guard personnel from twenty-one states participated. Seasoned ARNG pilots flew nineteen OH-58 helicopters out of South Burlington, Vermont, during night surveillance missions along the border. Concurrently, Air Guard pilots flew eight C-26 twin-engine aircraft out of Syracuse, New York. Operation Winter Freeze demonstrated that the National Guard was the most uniquely suited organization within the Defense Department to provide the right combination of manpower, skills, equipment, and experience to law enforcement agencies across the country on short notice in support of homeland security missions.[6]

## Operation Enduring Freedom

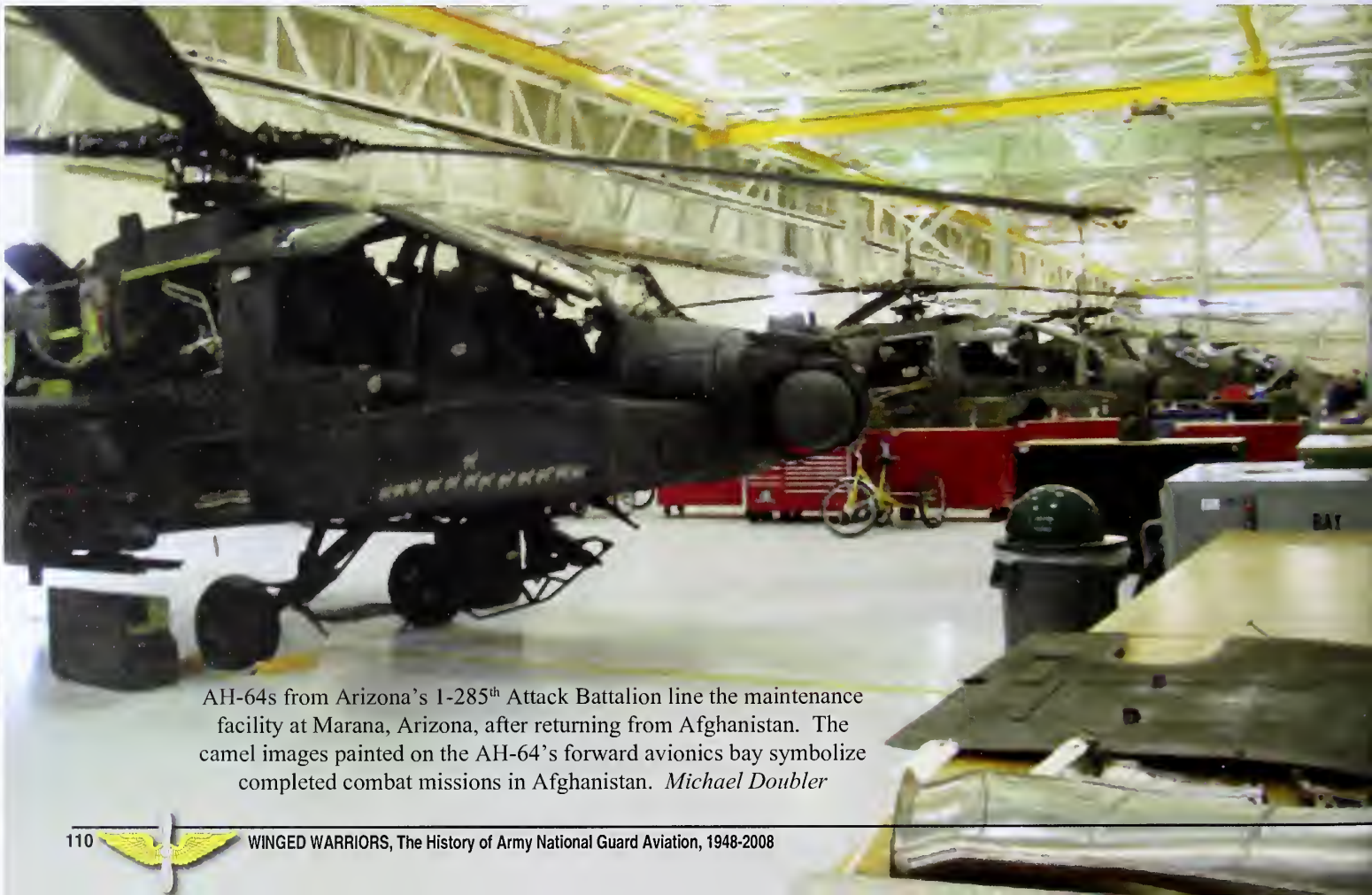
The attacks of 9/11 demanded a military response which came on October 7, 2001. Operation Enduring Freedom (OEF) had two main objectives: to destroy al Qaeda training camps in Afghanistan and to oust the fanatical Taliban regime that ruled the nation. Instead of a

major buildup followed by a deliberate invasion, OEF was a unique campaign. The main instruments of war in the opening months included precision guided munitions, high technology communications, SF operators and new Afghan allies. As the war expanded, Army combat forces consisted of a mix of Regulars and citizen-soldiers across every spectrum of combat and support operations.

The opening weeks of OEF achieved spectacular results, including the capture of the capital, Kabul, and the Taliban stronghold at Kandahar. By mid-December 2001, all major cities were free from direct Taliban control for the time being. A dedicated remnant of al Qaeda, Taliban and foreign fighters fled eastward, seeking cover in the high mountains along the Pakistani border. Coalition forces pursued, and major operations in late 2001 and early 2002—the battle of Tora Bora and Operation Anaconda—attempted to smash the last organized enemy resistance. However, coalition forces enjoyed only limited success as many enemy combatants managed to sneak away to new hiding places. Afterwards, the campaign focused on eliminating stubborn pockets of resistance, providing humanitarian support, promoting nation building and the training of a new Afghan National Army.

A CH-47 from Pennsylvania's 104th Aviation delivers troops to a remote mountaintop in Afghanistan while under fire from enemy fighters on surrounding mountains. *Pennsylvania National Guard*

No matter the type of operation, Army aviation was pervasive throughout the country. A true team of active Army, ARNG and USAR aviators coalesced in battle. Not since the Persian



AH-64s from Arizona's 1-285th Attack Battalion line the maintenance facility at Marana, Arizona, after returning from Afghanistan. The camel images painted on the AH-64's forward avionics bay symbolize completed combat missions in Afghanistan. *Michael Doubler*

Gulf War were Army aviators so decisively engaged in close combat. Afghanistan's rugged geography, long distances and harsh weather presented formidable challenges. High-altitude flying and dust storms, let alone enemy ground fire, created stressful flying conditions. On top of this, the country's remote location presented aviation logisticians with unique supply and maintenance challenges.

Like the campaign itself, the employment of aviation changed over time. Decisions made at the start of OEF all but eliminated the use of tube artillery as indirect fire support. As a result, ground forces came to rely upon the Apache as a form of "flying artillery." In numerous engagements during 2002-2003, AH-64s delivered direct fire support to friendly forces in contact with the enemy, often at near distances where close air support by jet aircraft was impractical. Even at high altitudes that tested other helicopters' endurance, AH-64s excelled in delivering direct fire support. Taliban and al Qaeda fighters took severe losses on the receiving end of Apache missiles, rockets and cannons. The AH-64 proved capable of absorbing tremendous battle damage while continuing to operate, thus proving the worth of many built-in survivability features.[7]

The Apache's success resulted in the deployment to Afghanistan of a number of ARNG attack helicopter units. Among the first was Company C, 1-130th from North Carolina, the Guard's longest serving Apache battalion. The "Acers" were mobilized on January 21, 2003, served in Afghanistan more than a year, and were released from active duty in July 2004. While in country, Company C flew its nine AH-64s as part of TF Knighthawk, an Army multi-component unit, which operated from Kandahar Air Field in south, central Afghanistan. TF Knighthawk was responsible for conducting and supporting combat operations in Afghanistan's southern and eastern provinces, an area renowned for its harsh deserts and high, rugged mountains. Company C's Apaches engaged the enemy on numerous occasions and with good effect.[8]

During 2004-2006, three ARNG attack helicopter units—Utah's 1-211th, Idaho's 1-183rd and Tennessee's 4/278th—flew a total of forty-three AH-64s in battle. Their effectiveness proved that citizen-soldier aviators were capable of mastering the tactical and technical rigors of direct combat. In addition to planned attacks in support of ground troops, the AH-64s performed rapid response missions to cover SF insertions and extractions and to counter enemy raids against scattered outposts and supply convoys. The AH-64's imposing presence and tremendous firepower alone were often enough to deter enemy action. The mere sight of Apaches usually reduced enemy surface-to-air fire against other coalition helicopters. AH-64s commonly escorted ground convoys, making enemy fighters reluctant to attack what otherwise would have been a lucrative target.[9]

Members of the 126th Medical Company (Air Ambulance) from Nevada display pride by posing with their Black Hawk in front of the main terminal of the Kandhar Airport in 2003. *Nevada National Guard*

In previous conflicts, the Army had relied heavily on ARNG air ambulance units, and the war in Afghanistan was no exception. Perhaps no ARNG MEDEVAC unit better personified noteworthy overseas combat duty than Oregon's 1042nd Medical Company (AA). It first deployed

to OEF in August 2002 under the command of Maj. Mathew J. Brady, operating from Bagram Air Base near Kabul. The 1042nd was no stranger to overseas deployments having previously completed a peacekeeping tour in Bosnia that imparted vital lessons in the use of their helicopters and life-saving equipment. During its first OEF tour, the company served as small, scattered detachments. At one point, Oregon's air ambulances were on duty simultaneously in Afghanistan, Kuwait and Saudi Arabia. Air crews stood ready to respond to calls within fifteen minutes, and when not on standby, spent considerable time training for their MEDEVAC missions. When calls came for evacuations, AH-64s usually escorted the UH-60s.[10]

For its outstanding service in OEF, the 1042nd became the recipient of AAAA's ARNG Aviation Unit of the Year award for 2002. Three years later, the Oregonians were back in Afghanistan, again operating from Bagram. Their service reflected one of the new realities of the war on terror: the likelihood of repeated overseas deployments. For some, the stress of multiple deployments—in the case of the 1042nd, three deployments within five years—was too much. Families and employers began to question multiple deployments; all too often jobs were lost and marriages ended. Some Guard members sought transfers to other positions less likely to be mobilized, while others chose to leave the service outright. However, there were always enough volunteers to fill the ranks of deploying units. One pilot, Chief Warrant Officer 2 Ken Tinseth from Portland, perhaps summed up the attitudes of the 1042nd's members on their second tour in Afghanistan: "I love my job…We're helping soldiers that need to be helped. It's a great mission!"[11]

Because of its cargo hauling capacity and ability to operate at high altitudes, the CH-47 Chinook became a workhorse of the Afghan War. As a result, CH-47s were employed in almost every role conceivable, from air assault to MEDEVAC. Their most frequent tasks were troop movements and resupply missions, especially in situations where high temperatures and altitudes prevented the use of other American and coalition helicopters. During 2004-2007, thirty-one ARNG CH-47s from five different states flew in Afghanistan.[12]

The performance of Company B, 3rd Battalion, 126th Aviation was among the best of the ARNG Chinook units to serve in OEF. Commanded by Maj. William C. Hummer, Company B was a split-state unit headquartered in Maryland with a detachment in New York. During its OEF deployment in 2006-2007, Company B flew twelve CH-47s, operating from three forward operating bases (FOB) that were four hundred miles apart: Bagram, Salerno and Kandahar. The Guardsmen flew in excess of 5,500 flight hours, moving 16,714 passengers and more than 5.8 million pounds of internal cargo and over 2.3 million pounds by external slingload. Company B took the lead during the largest air assault mission in OEF since Operation Anaconda in 2002, with the troops they delivered capturing a total of thirteen high value targets. At each of the FOBs, Company B established an efficient system of flight operations and maintenance management. The combination resulted in air lines of communication and supply remaining open at all times to supported ground units and the ability of CH-47s to push themselves to the limit in the most challenging operational conditions. For its outstanding service in OEF, Company B was selected as AAAA's ARNG Aviation Unit of the Year for 2008.[13]

# Afghan Airmanship

In late 2003, a unique photograph rapidly circulated throughout Army aviation circles, and even the entire Army, depicting an exceptional feat of airmanship. A CH-47 appeared suspended in the air with only its rear wheels touching the roof of a primitive, flat roof hut high in the Afghan mountains. Special Forces operators were busy at the rear of the aircraft loading enemy detainees, believed to be possible al Qaeda members. The belief in Army circles was that the airmanship was a display of the superior expertise and skills of flyers in the special operations community.

However, a closer examination of the picture and an accompanying image soon revealed a more important truth. It was true that the Chinook was conducting a spectacular pickup of enemy fighters captured by SF operators. The action occurred as part of Operation Mountain Resolve in Nuristan Province, Afghanistan, in early November 2003. However, the CH-47—with the aircraft tail number 264 clearly displayed in the second photograph—actually belonged to Company G, 104th Aviation of the Pennsylvania ARNG. At the controls were two citizen-soldier aviators from the Pennsylvania ARNG: Chief Warrant Officer 3 Larry Murphy and Chief Warrant Officer 3 Paul Barnes. In civilian life, Chief Murphy was an emergency medical service pilot and Chief Barnes was an information technology consultant for a construction firm.

In the end, the real facts behind the remarkable photograph eventually surfaced. Still, the picture remained an absolute testimony to the skill of Army flyers...the men and women of ARNG aviation!

(Photos and information courtesy of the Pennsylvania ARNG.)

## Force Modernization

In 2000 the ARNG aviation force included 2,024 helicopters of all types, representing roughly 43 percent of the Army's total aviation force. The Guard's presence was particularly robust in utility helicopters; 58 percent of the Army's Black Hawks were assigned to the states. The most modest representation among all classes of aircraft existed in the Apache force with ARNG attack helicopters representing less than one-third of the Army's attack helicopter capability.[14]

The receipt of the AH-64 Apache Longbow was a major modernization boost for the ARNG aviation combat force. A Longbow prepares to depart for a training mission from the apron at WAATS. *Michael Doubler*

Throughout the 1990s, the Army had implemented a modernization plan in which fewer but more modern and capable aircraft displaced legacy aircraft, resulting in a smaller force overall, but one that could arguably perform the same missions with greater ease and efficiency. With the start of a new century, the Army intended to continue that trend with the implementation of Army Aviation Transformation (AAT). At the heart of AAT was the complete modernization of the Army's entire helicopter fleet. A specific aim of the plan was the complete elimination in the ARNG of legacy aircraft represented by the AH-1 and the UH-1. Furthermore, earlier models of the AH-64, UH-60, CH-47 and OH-58 were to be turned in and replaced by newer models. Prior to the attacks of 9/11, NGB-AVS projected that all AAT initiatives would shrink the flying force from 2,024 helicopters in 2000 to 1,378 by the end of the decade, a reduction of 26 percent.[15]

Like plans in the 1990s, AAT reflected a modernization strategy that would result in a significantly smaller aviation force. Again, the states protested the loss of aircraft with impacts on personnel, equipment and facilities and the reduction in critical assets for state missions. Skeptics of AAT argued that modernizing the entire helicopter fleet would become cost prohibitive and never really happen. At the same time, everyone agreed that maintaining older airframes, especially those that were classified as non-deployable, was consuming way too much of the ARNG's aviation budget.[16]

Modernization plans called for across-the-board cuts in units and personnel as well. Some reductions were prompted by refinements in force structure; others by the wholesale reorganization or even elimination of units. A key issue was the creation of modular units in a uniform fashion to facilitate their rapid reassignment to task forces engaged in operational missions. All ARNG aviation brigades and battalions were to become modular, composite units. In the aggregate, the ARNG was slated to lose one battalion headquarters and thirty companies, cuts that would result in the loss of 500 pilot positions.[17]

Part of force modernization was increased automation in maintenance shops. An ARNG mechanic uses a laptop computer to examine maintenance records on an AH-64. *Michael Doubler*

# Maj. Gen. Jessica L. Wright

Jessica Wright enlisted in the Pennsylvania ARNG after graduating from Alderson Broaddus College. After completion of the Information Specialist Course at Fort Benjamin Harrison, Indiana, she attended the Women's Army Corps Officer Orientation/Officer Candidate School at Fort McClellan, Alabama. The "desire to do something different" prompted her to attend the Officers' Rotary Wing Aviator Course at Fort Rucker. In so doing, she became the first female Army aviator in the ARNG. It was during her initial training that she fell in love with flying.

Upon completion of flight school, she joined the 228th Aviation Company as a UH-1 and CH-47 pilot and was later appointed as the adjutant of the 28th Aviation Battalion. She became rated on the CH-54 Skycrane and joined the 1028th Transportation Company (Heavy Helicopter) as the flight operations platoon commander. In 1983, she was assigned to the staff of the new EAATS, where she served as the assistant operations and training officer and flight operations officer. A family decision then took her to Georgia, and she joined the Georgia ARNG's 1160th Transportation Company (Heavy Helicopter) where she served as the flight operations platoon commander.

General Wright joined the T10 AGR program in 1986 as an assistant professor of military science at Georgia Southern College in Statesboro. In 1989, she transferred to NGB as a tour officer where she served in a number of key assignments, including the Chief, Tours Management Office and Chief, Personnel Service Division in the ARNG Personnel Directorate. She also graduated from the Army Command and General Staff College and participated in the Army War College Military Fellowship at the Center for Strategic and International Studies in Washington, DC.

In time, General Wright returned to her native Pennsylvania. She served as commander of the 28th Aviation Brigade , 28th Infantry Division, based at Fort Indiantown Gap from June 1997 to November 1998, making her the first female maneuver brigade commander in the Army. She also served as Pennsylvania's SAAO, and in May 2000, she became Pennsylvania's deputy adjutant general for the ARNG. On March 5, 2005, Governor Edward G. Rendell swore General Wright in as the 50th Adjutant General of Pennsylvania, making her the first female general officer in the ARNG to serve as state adjutant general.

General Wright credits her aviation experience in helping her to gain access to increased opportunities for service. "Aviator's wings gives one instant credibility" she observed, especially in a profession where female service at the senior level was relatively new. "They [wings] are a discriminator, only in good way."

On the morning of September 11, 2001, NGB-AVS was hosting an Army-wide AAT implementation meeting at the ARNG Readiness Center in Arlington, Virginia. Transformation of the force was already underway, with the ARNG turning in the last of its AH-1s that very month. When terrorists suddenly struck the Pentagon only two miles to the east, attendees rushed from the meeting in a hasty effort to return to their normal places of duty. The meeting's disruption was an apt metaphor for AAT implementation, which the new war on terrorism affected in various ways. Aircraft scheduled for transfer to the ARNG often remained in active Army units slated for tours in Afghanistan and Iraq. For example, as the 101st Airborne Division engaged in OEF during 2002, the "Screaming Eagles" retained many of their assigned aircraft, withholding thirty-four UH-60s and twenty-four AH-64s slated to cascade to the Guard. Still, many successes occurred. By the end of 2002, the ARNG retired 373 UH-1s and increased its Black Hawk fleet to 587, finally achieving the significant goal of assigning UH-60s to every state, the District of Columbia and Puerto Rico.[18]

The war on terrorism and a number of new developments jeopardized the Army's plans for force modernization. The skyrocketing costs of an expanding war in Iraq and ongoing operations in Afghanistan threatened force modernization. The surprise cancellation in 2002 of the Comanche helicopter, a next generation Army aircraft, was done in order to free up monies for the purchase of other airframes. Critics of AAT who claimed the program was simply too expensive gained a broader audience. Modularity was questioned as well, and in the end, the combat aviation brigade (CAB) became the lowest level modular unit to contain a cross section of aviation capabilities.[19]

In the states, the TAGs argued with good effect that to shrink the cargo and utility helicopter fleets any further was to take aviation in the wrong direction. Homeland security requirements and routine state missions demanded aviation assets. Lt. Gen. H Steven Blum, the CNGB at the time, pledged that each state would retain at least one flying unit. One outcome of resourcing decisions for homeland security was that the life of the UH-1 would be extended for the foreseeable future.[20]

A combination of pressures resulted in modifications to the original AAT. Starting in 2004, a more modest plan was implemented. However, the original modernization strategy remained intact; fewer numbers of modern and more capable aircraft would replace larger numbers of older, legacy aircraft. One of the major accomplishments of continued modernization was the fielding of the ARNG's first Apache Longbows. Arizona's 1-285th Aviation (Attack) received nine of the advanced attack helicopters in 2004, posturing the battalion for a future deployment to Afghanistan. By the end of 2005, the Army had increased the number of the Guard's modern aircraft to include 631 of 710 required UH-60s; 133 of 159 required CH-47s; 166 of 296 required AH-64s; and 20 of 24 required OH-58Ds.[21]

## Operation Iraqi Freedom, 2003-2005

The Iraq War constituted the largest and longest commitment of citizen-soldier aviators to combat in the history of ARNG aviation. Throughout their deployments, aviation personnel were engaged in every aspect of combat and support operations. OIF was vastly different from the war in Afghanistan, but ARNG aviators consistently displayed professionalism that earned the respect of friends and foe alike.

In contrast to OEF, the Iraq War began as a fairly conventional campaign, with a large buildup of forces prior to the launch of a major invasion aimed at the enemy's capital. From the very beginning, ARNG aviation played a considerable role in Iraq. The bulk of mobilizations for the campaign's opening phase began in earnest in January 2003. In total, forty-four units of all types and sizes were mobilized to participate in the coalition's opening offensive.[22]

The first mobilization iteration was not without its shortcomings. The Army established Fort Hood, Fort Sill and Fort McCoy, Wisconsin, as aviation mobilization stations. As a rule, ARNG personnel believed the mobilization sites were at first staffed and resourced inadequately. Shortages in IPs and maintenance trainers were especially felt. Fort Rucker made attempts to provide air crews with specific training to prepare them for Iraq, but aviators felt their post-mobilization training too often lacked real substance. (The most valuable training took place once units arrived in the Persian Gulf region.) On the other hand, the Army bent over backwards in the expenditure of resources to get aircraft ready for combat.[23]

In the states, the mobilization for Iraq solicited varied reactions. Many TAGs understood the significance of toppling Saddam Hussein's rogue regime. Other states were rightly concerned with satisfying already existing challenges, including the mobilization of aviation units for OEF, homeland security and normal state missions that continued unabated. However, once OIF mobilization orders arrived, the states rallied. A major characteristic of the mobilization was extensive cross-leveling of personnel and equipment, not only within the states, but across state lines as well. Such actions were necessary to provide units the resources to make them fully combat ready prior to deployment.[24]

One aviation mobilization action became notorious across the entire Army Guard. The Pentagon wanted to mobilize only the twenty-two pilots assigned to Mississippi's OH-58D Kiowa Warrior unit. The ARNG senior leadership reluctantly agreed to the measure, though it was concerned the action might set a dangerous precedent for stripping personnel from units for use as individual fillers. Part of the concern grew out of the National Guard's long held conviction that its federal mission was to provide entire reserve units to the Army and the Air Force in wartime instead of a pool of readily available individuals.[25]

The size, scope, and duration of the mobilizations for OEF, OIF, homeland security, and peacekeeping operations in the Balkans altered the functioning of NGB-AVS. In addition to their normal mission of programming and allocating resources to the states, staff personnel took ownership of mobilization management. They scrubbed mobilization requirements to identify units and even individuals for active duty. As the war on terrorism progressed, NGB-AVS tried to identify units a year ahead of expected mobilization dates to allow time to acquire and allocate the necessary resources. In some cases, units already at mobilization stations needed additional aircraft assigned and flying hours funded so the Army could certify them as combat ready. Determining individual soldier availability for deployment as either combat replacements or individual fillers was a new task, and it prompted much better coordination between the ARNG Aviation and Safety Division and SAAOs.[26]

Members of the 75th Exploitation Task Force prepare for a mission in Iraq in April 2003. They are about to board a UH-60 from Wisconsin's 1-147th Aviation, which was the primary aviation asset assigned to TF 75. *Lt. Col. Russell Sweet, 1-147th Aviation, Wisconsin National Guard*

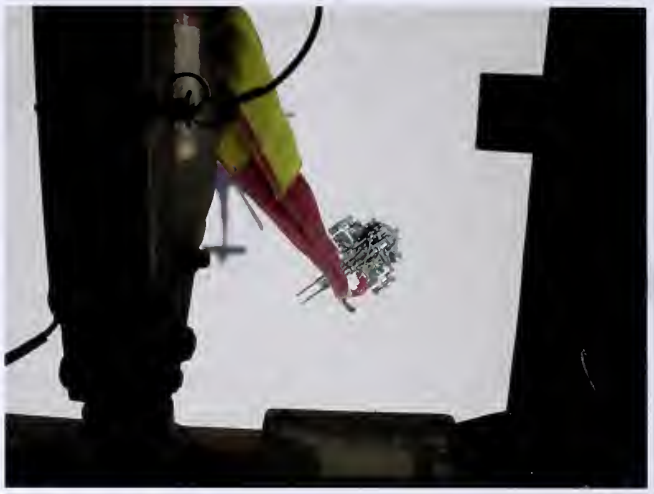
The Iraq War opened on March 7, 2003, with the stated objectives of ousting Saddam Hussein from power and eliminating his stockpiles of WMD. Coalition forces quickly advanced on the

Iraqi capital. After Baghdad's capture in April 2003, Saddam Hussein and his henchmen were on the run. Coalition forces immediately turned their attention to the war's second major objective: the hunt for WMD.

The group initially responsible for all WMD search efforts was the Army's 75th Exploitation Task Force whose mission was to scour the country looking for clandestine stockpiles of outlawed weapons. In the wake of invading forces, TF 75 searched nineteen known weapons sites and sixty-eight suspected sites. Investigators consistently found potential WMD sites to be looted, burned or improperly identified. By mid-May the search had produced few tangible results, and TF 75 became more of an intelligence gathering unit than a tool of WMD discovery.[27]

ARNG aviation made an important contribution to TF 75 and the hunt for WMD. Most of the task force's aviation assets came from the 1st Battalion, 147th Aviation of the Wisconsin ARNG. The day after Christmas 2002, Lt. Col. Thomas Rhatican, the 1-147th's commander, discovered that his Black Hawk battalion had been assigned to support TF 75. Immediately, the two groups held discussions on the tactics and techniques for inserting and extracting search teams and the transport of WMD. Mobilization day on February 2, 2003, found the UH-60 battalion ready to go "to the sandbox." Since August 2002, nearly all of the unit's pilots, crew chiefs, mechanics and staff personnel had gained experience in desert operations during rotations to Kuwait.[28]

In the war zone, Lieutenant Colonel Rhatican's command grew to a full-fledged aviation task force with the addition of an ARNG Black Hawk detachment and three Army Reserve CH-47 companies. After the invasion began, TF 1-147 flew its first mission in support of TF 75 by sling loading a Humvee to Tallil Air Base and backhauling classified documents linked to Iraqi WMD programs. In the following weeks, the Guard aviators operated from Tallil and other locations while providing logistical and transportation support and airlifting bundles of classified documents to intelligence collection sites in Kuwait. In early May, a 1-147th detachment moved to Baghdad, and after mounting special monitoring equipment on one aircraft, flew low-level radiological surveys over the capital and surrounding area. Without TF 1-147th's aviation support, TF 75 would have had extreme difficulty conducting its search for WMD.[29]



To prevent Iraqi insurgents from firing on coalition helicopters, air crews from Wisconsin's 1-147th Aviation would pick up abandoned enemy anti-aircraft guns and sling load them to secure locations. *Lt. Col. Russell Sweet, 1-147th Aviation, Wisconsin National Guard*

In the months following the capture of Baghdad, the removal of Saddam unleashed an orgy of looting and reprisal killings throughout Iraq. Coalition forces were spread too thin to quell violence and restore order. By the end of 2003, the situation had worsened. Saddam loyalists, al Qaeda terrorists, foreign fighters and various indigenous militias organized a multifaceted insurgency against the coalition. Iraq was awash in weapons and munitions, and insurgents lashed out at coalition troops with automatic weapons, machine guns, rocket propelled grenades (RPG) and improvised explosion devices (IED).

Army aviation played a major role in all aspects of operations. Due to the country's vast size, helicopters were an essential means of transport. With increased violence, aviation became the safest means of cross-country movement. Armed helicopters escorted convoys, stalked insurgents and provided fire support

during small unit engagements. When troops got in trouble, aviation provided rapid response, search and rescue and MEDEVAC. Flying in Iraq got increasingly dangerous as helicopters took fire from small arms, machine guns, RPGs and shoulder fired surface-to-air missiles. More than a dozen U.S. helicopters went down between May 2003 and January 2004, often producing terrible casualties. In November 2003 a missile downed an ARNG CH-47 from Illinois, killing sixteen. Two months later a MEDEVAC Black Hawk crashed due to enemy fire, killing nine.[30]

While returning from a mission to Mosul, the ramp gunner of a CH-47 Chinook of the 75th Exploitation Task Force returns incoming enemy fire. *Lt. Col. Russell Sweet, 1-147th Aviation, Wisconsin National Guard*

In the autumn of 2003, a command decision was announced that set OIF on a new course and held serious consequences for the entire ARNG. The first group of units that had toppled Saddam's regime and initially occupied the country were to be replaced by a second troop rotation designated as OIF II. Tours of duty for OIF II and subsequent troop rotations were to last a year or more. ARNG participation in the initial invasion had numbered over 30,000, and OIF II called for a second wave of Guard personnel of nearly 40,000. Units were to mobilize during late 2003 and early 2004 and arrive in Iraq in the spring of 2004.[31]

The decision to begin periodic troop rotations placed tremendous demands on ARNG aviation. The order of battle for the initial invasion had included forty-four units; OIF II was even larger, eventually encompassing forty-six units, 118 aircraft and 2,323 personnel. The first unit mobilized for OIF II was a C-23 Sherpa detachment from Hawaii's Company E, 1-207th Aviation, which entered active duty on November 14, 2003. Guardsmen were told to expect a tour of twelve months with "boots on the ground" in Iraq, meaning that their total mobilization period could stretch to 15-18 months.[32]

The most significant contribution ARNG aviation made during OIF II was the deployment of Mississippi's 185th Aviation Brigade. The original invasion force had included eight Army aviation brigades, but OIF II included only three. Two active duty brigades supported the 1st Infantry and 1st Cavalry Divisions; the 185th's mission was to support the Army's main operational command in Iraq, the U.S. III Corps. The brigade headquarters was responsible for operations in Iraq during February-December 2004. Commanded by Col. Bradly S. MacNealy, the 185th (known as the Catfish Brigade) included ARNG UH-60, CH-47 and C-23 units, as well as several maintenance organizations. A number of active duty and USAR units were assigned as well, making the brigade a genuine, multi-component unit.[33]

Reduced aviation assets faced with ever-expanding missions were forced to maximize assets and increase efficiencies. III Corps challenged Colonel MacNealy to maximize each hour flown, make better use of cargo aircraft and reduce phase maintenance times. The measure for effectiveness changed from "numbers of hours flown" to "passengers, cargo and equipment hauled per flight hour." To meet mission requirements, the 185th flew every available aircraft day and night while trying to exceed a 75 percent OR rate.[34]

ARNG aviators tackled each challenge with determination. Better coordination with supported units resulted in more seats filled and cargo space utilized on each flight. There was no infrastructure or personnel to load and unload CH-47s and C-23s; air crews often did those tasks themselves. The 185th created cargo handling

# Maj. L. Tammy Duckworth

One of the most remarkable ARNG aviators of the war on terrorism is Maj. L. Tammy Duckworth of Illinois. By her actions, she proved what a severely wounded veteran can achieve despite significant obstacles.

Major Duckworth was piloting a Black Hawk helicopter near Baghdad on November 12, 2004, when her aircraft was shot down by an RPG. The explosion blew through the cockpit, taking Duckworth's legs with it. With the aid of her crew, she was able to land the Black Hawk before she completely passed out. At a Baghdad hospital, Duckworth awoke long enough to ask about her crew, all of whom survived the crash.

Within days, Duckworth was transferred to Walter Reed Army Medical Center in Washington, DC. She was no longer fighting for her life, but learning to live as a disabled veteran. She lost the use of her right arm and narrowly escaped having it amputated. Then there was the issue of her legs: being fit for prostheses, learning to walk again, and a grueling rehabilitation regimen that left her exhausted. Strong and athletic, Duckworth had to cope with being newly dependent, giving up former interests and adapting to her new look. Throughout, "The Soldier's Creed" was a source of strength.

Tammy Duckworth's father was a retired Army captain and Purple Heart recipient. He had experienced a heart attack the week before his daughter was wounded and another two weeks later. She had not seen him in a year and a half, and doctors finally cleared him to fly to Washington, the same day that a general pinned on her uniform the Purple Heart, the Air Medal and the Army Commendation Medal. Father and daughter, both Purple Heart recipients, spent the Christmas holidays together. Unfortunately, he soon suffered a fatal heart attack. Just four months after fighting for her own life, Tammy Duckworth attended her father's funeral at Arlington National Cemetery.

Afterwards, she began a new life of public service. She gained notoriety by speaking before Congress about the needs of wounded veterans. In 2006, Duckworth ran for Congress, losing the election by the narrowest of margins. Afterwards she was appointed as the director of the Illinois Department of Veterans Affairs. In 2008 she addressed the Democratic National Convention on the issue of veterans' rights. The following year, she was sworn is as the Assistant Secretary for Public and Intergovernmental Affairs in the U.S. Department of Veterans Affairs.

Despite her many successes, Tammy Duckworth remained humble about her military experience. Of her own wounding, she maintains that she was just doing her job like any other soldier and that she would not have survived without the aid of her flight crew with whom she maintains close contact.

operations from scratch, hiring civilian contractors to deal with cargo on the ground. Increasing the flow of repair parts allowed mechanics to reduce the number of days required to complete phase maintenance. The average phase time for UH-60s and CH-47s was reduced to fewer than twenty days.[35]

The 185th returned home in December 2004 with a job well done. Guard aviators flew over 35,000 UH-60 hours, over 16,000 CH-47 hours, and over 6,000 C-23 hours. They executed over 5,000 separate missions, carrying more than 210,000 passengers and hauling in excess of 30,000 tons of cargo. Maintainers pumped more than six million gallons of fuel, completed 134 aircraft phases and distributed more than 90,000 aircraft repair parts. In all, Mississippi's 185th Aviation Brigade set a high standard for mission accomplishment for other ARNG aviation units that would serve in Iraq.[36]

The following year saw no letup in the amount of ARNG aviation assets committed to OIF. During 2005, in excess of one hundred ARNG UH-60s were sent to Iraq. A diverse range of support units served as well, including air traffic control and maintenance. California's 1106th AVCRAD worked at Patton Army Air Field at Camp Arifjan, Kuwait, with regional forward contact teams at Balad Air Base north of Baghdad and Bagram Air Base, Afghanistan. The AVCRAD footprint was firmly established, and other deploying AVCRADs followed suit in maintaining theater-wide depot maintenance and parts supply. In total, 2,126 ARNG aviation personnel were on duty in Iraq during 2005.[37]

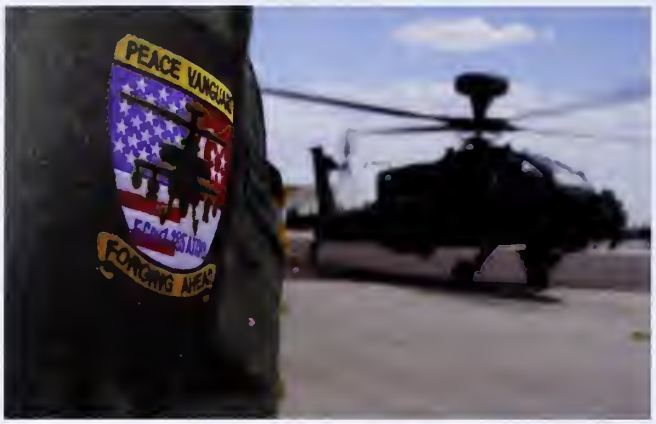
## Peacekeeping Operations

Even with the wars in Afghanistan and Iraq and homeland security missions, the U.S. military still faced peacekeeping commitments in the Balkans. In June 1998, NATO had decided to curtail the extent of the SFOR in Bosnia-Herzegovina. The new effort was named Operation Joint Forge (OJF), and the United States agreed to provide approximately 6,900 service members each year. However, war soon broke out in neighboring Kosovo. After an allied aerial offensive brought an end to hostilities in 1999, the need for peacekeepers there existed as well. The Kosovo peacekeeping effort became known as "KFOR".

Starting in 2001, ARNG division and brigade headquarters assumed most of the command responsibility for OJF and KFOR, with state soldiers becoming the primary peacekeepers. In December 2004, OJF formally ended, replaced by an even smaller peacekeeping contingent provided primarily by the European Union. However, the KFOR remained necessary, even thought its focus shifted more toward humanitarian support, counter-terrorism and intelligence gathering efforts and the apprehension of war crimes suspects.

Despite all of its other domestic and overseas commitments, ARNG aviation maintained an active role in OJF and the KFOR. In 2003, nearly 4,600 Guard personnel served in Bosnia and Kosovo, including aviation units and personnel from seven states and the OSAA. The average peacekeeping tour was to be six months, but many individuals and even a number of units were extended to twelve months. Rather standard aviation support packages became a part of each OJF and KFOR rotation. Between 2004 and 2007, the annual aviation commitment averaged twenty-two aircraft and 250 aviators. With combat duty being the norm elsewhere, enthusiasm in the ARNG aviation community for peacekeeping duty in the Balkans waned. In earlier years, flying units had sought service there, but by 2008, NGB-AVS had to petition for units willing to deploy to the Balkans.[38]

The ARNG aviation force took a unique role in strengthening America's ties with a close ally in the war on terrorism. As early as January 1996, the Republic of Singapore had trained with Texas ARNG aviators on the CH-47. By training in the United States, the Singapore military overcame the constraint of limited training space and




Peace Vanguard at Marana, Arizona, was one of four military training sites established by the Republic of Singapore in the United States. Singapore's two helicopter training sites—the other is in Grand Prairie, Texas—are partially staffed by ARNG aviation personnel. *Peace Vanguard*

and benefited from other joint training opportunities with American forces. The relationship eventually resulted in the construction of a Republic of Singapore Chinook training facility in Grand Prairie, Texas, which opened in November 1997. The "Peace Prairie" program was so successful that when Singapore purchased the Apache Longbow in 2002 it received permission to open a second site. "Peace Vanguard" was established at Silver Bell Army Heliport adjacent to the WAATS so as to benefit from the AH-64 training capabilities that the Marana, Arizona, site afforded. A small staff of ARNG aviators helped to administer each site and to facilitate training, a practice that continues to the present.[39]

## Hurricane Katrina

An unexpected natural disaster of historic proportions resulted in the largest call-up ever of National Guard personnel for a domestic emergency. After passing over southern Florida, Hurricane Katrina struck the Gulf Coast in the early morning hours of August 29, 2005, with howling winds, torrential rains and an overwhelming tidal surge that resulted in one of the greatest natural disasters in American history. The following day, the storm's tidal surge breached the levee system protecting New Orleans, and floodwaters inundated the city with as much as fourteen feet of water in some places. Hundreds of thousands had already fled in response to an earlier evacuation order, but thousands of others who were either unwilling or unable to leave were left marooned. Local first responders faced the almost impossible task of removing the sick, the elderly and those trapped in the city. With all essential services disrupted, lawlessness soon gripped New Orleans. In the end, the storm left nearly 1,800 dead in the Gulf Coast states and produced the most expensive and damaging natural disaster in U.S. history.

A Mississippi Guard Black Hawk from the 1-185th Aviation sits on the beach near Gulfport in the aftermath of hurricane Katrina in September 2005. The unit had just returned from a tour of Iraq in December 2004. *National Guard Bureau*

Within four hours of Katrina's passage, Guard forces were in the water and on the streets rescuing people in the most devastated communities. The following day, the governors of Louisiana, Mississippi, and Alabama called up a total of 7,500 troops as federal and private relief organizations struggled to reach New Orleans and to comb through the huge debris field left along the coast. One of the first overt actions by Pelican State aviators occurred at the Louisiana Superdome in New Orleans where thousands of

residents had first concentrated to wait out the storm. After city streets flooded, they organized and operated an impromptu heliport on the elevated deck surrounding the Superdome. For a time, the air bridge was the only way in and out of downtown New Orleans.[40]

An increasing awareness of the severe damage Katrina had inflicted over a four-state area resulted in a disaster response of historic proportions. Forty-eight hours after Katrina made landfall, 11,000 Guard personnel were in action on the ground, but damaged communications networks, downed power lines, flooded roads, and destroyed bridges slowed progress. By the end of the first week, the National Guard mounted an unprecedented effort to aid in rescue and recovery efforts, to impose order where lawlessness had broken out, and to provide succor to evacuees. Through the EMAC network, the states promptly mobilized and deployed over 50,000 Guard men and women and a vast array of aircraft, vehicles, equipment, and supplies. Citizen-soldiers worked closely with law enforcement, performed vital rescue work, delivered water, food, and medicine, and helped to clear roads and remove debris.[41]

An Army Guard MEDEVAC ship, confused by some in the media as a Red Cross helicopter, flies low over New Orleans after Hurricane Katrina. *National Guard Bureau*

An ARNG UH-60 flies past the damaged roof of the Louisiana Superdome during the early stages of the Hurricane Katrina rescue and recovery effort. *National Guard Bureau*

The massive rescue and recovery effort included the largest concentration ever of ARNG aircraft for a domestic emergency. The day before Katrina struck, a total of thirty-five fixed and rotary wing ARNG aircraft had been on standby in Louisiana and Mississippi. An unprecedented aircraft armada from across the nation was soon winging its way south. On September 4, a week after Katrina struck, the ARNG had concentrated 102 aircraft in the region. The peak commitment of resources occurred on September 8, when 151 aircraft—141 helicopters and 10 fixed wing—were on duty. Over time, rescue efforts were curtailed, and aircraft and personnel began to return home. On September 16 the number of aircraft deployed dropped below one hundred; four days later the number fell to eighty-three as rescue operations ceased and more routine recovery missions commenced.[42]

The crew of a Texas Black Hawk load distressed evacuees from the Ernest N. Morial Convention Center in New Orleans a few days after Hurricane Katrina ravaged the region. *National Guard Bureau*

ARNG Spc. Clint Aucoia from Morgan City, Louisiana, escapes the rotor wash of the blades of a CH-47 Chinook helicopter after attaching a cargo hook supporting a large bag of sand for levee repairs in New Orleans on September 7, 2005. *U.S. Navy*

At the height of aerial rescue efforts, the ARNG went to work as part of a massive joint aviation task force that included other military and civilian assets to save and aid stranded survivors. ARNG helicopters were at the forefront of rescue efforts, plucking survivors from the roofs of swamped homes in and around New Orleans. Millions of Americans at home watched television in suspense as hovering Black Hawks hoisted thousands of survivors to safety. In New Orleans alone, the Guard rescued nearly 4,200 residents. At the same time, CH-47s dumped water on scattered fires and lifted heavy loads of barrier materials to plug massive breaches in the levee system. In addition, aviators performed medical evacuation, aerial resupply of food and water, slingload operations, troop movement, firefighting, and transport of key personnel and the media. Four Chinooks and forty-one personnel from Singapore's Peace Prairie training site in Texas joined the ARNG rescue fleet, the only allied aircraft to do so.[43]

While much of the national media coverage centered on the unfolding tragedy in New Orleans, ARNG helicopters ranged throughout the remainder of Louisiana, southern Mississippi, and

parts of Alabama, rescuing those stranded and delivering food, water and supplies to devastated towns accessible only by air. Before life-saving rescue efforts ended across the region, ARNG air crews had rescued 15,975 civilians. (Air Guard helicopters were pressed into service as well, saving another 1,443.) All missions were performed without a serious safety incident, stark testimony to the effectiveness of airspace management methods and the professionalism of air crews.[44]

An Army Guard UH-60 drops sandbags in an attempt to repair one of the breached levees around New Orleans. *National Guard Bureau*

ARNG aviation facilities were essential to rescue and recovery efforts. In Mississippi the massive 400 feet long hangar that houses the 1108th AVCRAD on the perimeter of the Gulfport-Biloxi International Airport stood only two miles from the coast. On August 29 hurricane force winds and heavy tropical rains lashed the AVCRAD, causing the main hangar walls to bow, shake and rattle. Floodwaters from Katrina's massive storm surge spilled onto the airport property, reaching within one hundred yards of the AVCRAD facility. The hurricane left moderate damage, but electrical power was completely knocked out. The most severe damage occurred in the paint hangar where winds unhinged the hangar doors that in turn smashed up an AH-64.[45]

After sunrise the following day, an OH-58 piloted by Lt. Col. Richard P. Poole, the 1108th's deputy commander, lifted off from the AVCRAD, the first helicopter to get aloft over Mississippi following Katrina's passage. A long-term resident of the Gulf Coast, Lieutenant Colonel Poole was taken aback by the total destruction the winds and storm surge had wrought. The obliteration was so severe in places that some towns could be identified from the air only by the relative position of their remaining debris field to the coastline. Electrical power and cell phone service was down everywhere. That first flight resulted in a preliminary damage assessment of coastal Mississippi and the identification of potential landing zones for the first rescue flights that would arrive within hours.[46]

The 1108th AVCRAD became a FOB for all aerial operations throughout southern Mississippi. Additional helicopters soon arrived, as did relief supplies by ground convoy from Camp Shelby. On the early afternoon of Tuesday, August 30, Mississippi's TAG, Maj. Gen. Harold A. Cross, ordered every aircraft available aloft to deliver emergency supplies and to make further damage assessments. Crews landed wherever groups of survivors had gathered, delivering water and food and evacuating the injured. At the effort's peak, as many as eighty helicopters from the National Guard and other state and federal organizations operated from the AVCRAD.[47]

The 1108th AVCRAD in Gulfport became the central facility for recovery efforts in southern Mississippi. A tent city sprang up around the main hangar to house troops coming in from all across the nation. *1108th AVCRAD*

Over the next two weeks, the 1108th repaired and refueled aircraft to keep them in the air. Limiting factors were the lack of readily available repair parts and the inability to pump fuel from regular storage tanks because of the loss of electrical power. One-third of the hangar floor became sleeping quarters for visiting air crews. Within a few days a large tent city grew up around the main hangar. The site supported a large contingent of ARNG ground units that arrived from across the nation to facilitate recovery efforts. Two weeks after Katrina passed, electrical power was finally restored. Not until nearly a month had passed did the 1108th return to any semblance of normal activity.[48]

Due to the enormous size and complexity of aerial operations along the Gulf Coast, ARNG aviation's response was not without its difficulties. While the "can-do" spirit along the Gulf Coast overcame the bulk of these obstacles, there was universal recognition for necessary improvements in many areas. In mid-November 2005, NGB-AVS convened a conference with the aim of examining lessons learned from that year's hurricane season, which included Hurricanes Rita and Wilma as well as Katrina. Aviation experts concluded that it was necessary to create a formal, joint operations plan at the national level to address future all hazard response missions. Flying units and their headquarters needed additional training in emergency response tactics and command and control functions. Lastly, joint exercises were needed to improve efficacy in disaster response among the military services, state emergency management agencies, and local first responders.[49]

## Operation Iraqi Freedom, 2006-2008

The year 2006 appeared as a distinct, difficult benchmark in the Iraq War. In February, al Qaeda's shocking destruction of the golden domed Askariyya Mosque in Samarra, one of the most revered Shiite sites in the world, resulted in a countrywide spike in violence as incensed Shiites lashed out at rival Sunnis with reprisal attacks. The widespread brutality shook American public support for the war effort and caused a crisis of confidence in the war's final outcome.

Late in the year, the Iraq Study Group presented President George W. Bush with a report containing a wide range of recommendations for taking the war in a new direction. Instead, the president favored a new "surge strategy" to increase the number of U.S. troops on the ground as the best means of quelling the violence and guaranteeing the survival of the fledgling Iraqi government. In the meantime, the campaign that started as a quest for regime change reached its eventual conclusion on December 30. Convicted of crimes against the Iraqi people, Saddam Hussein went to the gallows to receive his sentence of death by hanging. The very next day, the number of American troops killed in Iraq reached 3,000.

The 36th Combat Aviation Brigade (CAB) from Texas became ARNG aviation's largest force in Iraq during the first part of the surge period. The 36th was the ARNG's first CAB, organized as a result of the modular transformation of the Army. With its deployment to Iraq, the 36th became the first ARNG CAB responsible for an area of operations in an active theater of war.

Capt. Matt Jordan of the 1-108th Aviation from Kansas pilots a Black Hawk during his tour in Iraq with the 36th CAB in 2006. *Kansas National Guard*

The 36th CAB's headquarters was mobilized on January 9, 2006, with most of its subordinate units entering active duty throughout the rest of the month. The 36th took the nickname "Task Force Mustang," with about half of its units coming from outside Texas. (See Table 4.) In total, the brigade numbered approximately 2,600 ARNG soldiers from forty-six states and three U.S. territories. Additionally, there were over 200 Individual Ready Reservists from the USAR assigned. TF Mustang fielded twenty-four AH-64A, eighty UH-60A/L and twelve CH-47D helicopters. Its fixed wing assets were composed of a detachment from OSAA, including twenty-five volunteers from NGB, the first NGB oriented unit to serve in OIF. Another twenty OSAA volunteers were from Missouri and ten others from across the nation. Their primary aircraft was the C-23 Sherpa, although UC-35s and C-12s were also flown.[50]

Post-mobilization training was conducted primarily at Fort Hood, though some units at first trained at Forts Sill and Rucker. Finally, all of the 36th's units converged on Fort Hood, giving its commander, Col. Vernon Sevier, Jr., of Texas, a chance to work closely with his officers and to meet most of his soldiers for the first time. The brigade underwent extensive "theater immersion training" to prepare for its mission of supporting the Multi-National Corps-Iraq. Much of this training highlighted the tasks citizen-soldiers were most likely to conduct in Iraq, including force protection, air assault, air movement and attack helicopter operations. The training emphasized "lessons learned" in order to avoid some of the pitfalls that had led to previous combat deaths. Colonel Sevier prepared his brigade to perform a spectrum of tasks, including IED detection, the movement of troops and cargo, aerial support to ground convoys and a myriad of other support missions. With the adoption of the motto "Take Charge!" the brigade was declared ready to deploy at the end of July 2006.[51]

A C-23 Sherpa of South Dakota's Detachment 3, Company A, 641st Aviation lifts off from LSA Anaconda, Iraq in April 2008. *NGB-AVS*

## TABLE 4. 36th COMBAT AVIATION BRIGADE OPERATION IRAQI FREEDOM, 2006-2007

| State [1] | Designation | Primary Aircraft |
|---|---|---|
| TX | HHC, 36th Combat Aviation Brigade | None |
| CO | 2-135th Aviation | UH-60A/CH-47D |
| AL | 1-131st Aviation | UH-60A |
| KS | 1-108th Aviation | UH-60A |
| TX | 1-149th Aviation (Attack/Reconnaissance) | AH-64A |
| TX | 449th Support Battalion (Aviation) | None |
| AR/FL | Company C (Air Ambulance), 1-111th Aviation | UH-60A |
| Various | OSAA Detachment | C-23B/C-12/UC-36 |

[1] The states listed for each unit are the state of assignment, though each unit had ARNG aviation personnel assigned from other states throughout the nation.

Most of the members of TF Mustang arrived at Camp Buehring, Kuwait, in mid-August 2006. After several weeks of acclimation and picking up equipment from shipping docks, the CAB moved to its duty station at Logistical Support Area (LSA) Anaconda on Balad Air Base, seventy miles north of Baghdad. There it replaced an aviation brigade from the 101st Airborne Division. The 36th became operational on September 16, flying its first combat patrols and other missions. In early 2007, elements of the 1-149th and 449th Support Battalion transferred to Basrah to work with British forces supporting coalition efforts in southern Iraq. The Americans lived and worked with their British allies, running joint security missions. Those elements eventually returned to LSA Anaconda to return home with the rest of the brigade.[52]

Citizen-soldiers usually learn to be self-sufficient while deployed overseas. Capt. Joseph Toepke watches as Sgt. Jennifer Butler nails a support beam to fabricate a building in their company area at LSA Anaconda, Iraq, in 2006. Both were assigned to the 1-108th Aviation from Kansas. *Kansas National Guard*

Over the next eleven months, the brigade conducted numerous missions, from supporting ground operations with attack helicopters to patrolling roads ahead of convoys and moving tons of supplies and personnel. By the end of its tour, the 36th had transported 310,402 personnel and nearly 11.5 million tons of cargo and supplies. Its Apaches had flown 120 combat engagements in support of coalition forces, expending 30,000 rounds of 30mm ammunition, 400 rockets, and 45 Hellfire missiles. AH-64s were credited with killing 61 enemy combatants and capturing 133 others. In addition, MEDEVAC helicopters evacuated 5,124 wounded and injured.[53]

A CH-47 Chinook from Company B, 2-135th Aviation, 36th CAB prepares to conduct a nighttime mission from LSA Anaconda, Iraq, in December 2006. *U.S. Army*

None of these missions could have been successfully completed without maintenance and mechanical support from hundreds of ground-based personnel. The maintainers were responsible for the fueling and rearming of each helicopter between missions. Whenever a mechanical problem arose, they determined what was wrong and how best to fix it quickly while assuring aircraft were safe to fly. Though little heralded, these citizen-soldiers played an important role in the overall success of the 36th CAB in achieving its missions. In all, the brigade flew nearly 90,000 hours. Not one life was lost or person injured as the result of a mechanical failure, and no machines were lost due to bad or faulty maintenance.[54]

Two maintainers from the 36th CAB work on the wiring in the tail section of an AH-64 Apache. The distinctive paint scheme marks the aircraft as belonging to the Texas ARNG. *NGB-AVS*

There were heroes, too. During their deployment, the men and women of the 36th CAB, like other ARNG members in Afghanistan and Iraq, proved that citizen-soldiers could fight. Two of the riskiest and most dangerous missions performed were air assaults and downed aircraft recoveries. The 2-135th Aviation executed most of the air assault missions, which were flown two or three times each week. The 449th Support

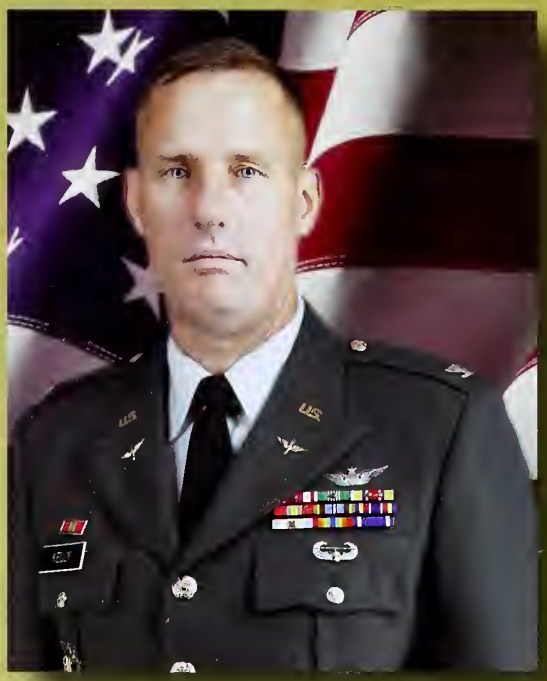
ARNG aviation mechanics overhaul an engine from a CH-47 Chinook in Iraq in 2006. *NGB-AVS*

Battalion executed nine downed aircraft recovery missions, mostly at night.

Chief Warrant Officer 3 Jerry D. Sartin from Destin, Florida, received the Silver Star. On January 20, 2007, he was piloting a Black Hawk assigned to Company B, 1-131st Aviation when a furious firefight broke out. He maneuvered the aircraft aggressively to allow the door gunners to eliminate four insurgents who had just shot down "Easy 40," another TF Mustang UH-60. All twelve service members aboard Easy 40 perished in the crash.[55]

Help from above! An ARNG AH-64 Apache flies cover for a ground convoy outside of Baghdad in 2007. *NGB-AVS*

# Col. Paul M. Kelly



Paul Michael Kelly received his commission in 1982 through ROTC at the University of Dayton. His first assignment was as a platoon leader with the 372nd Engineer Battalion, Ohio ARNG. Following a civilian job move to South Carolina, he joined the South Carolina Guard. In 1984 Kelly was accepted for initial entry rotary wing training. Upon his graduation from flight school, he served in a series of staff level assignments in the 1st Battalion, 151st Attack Helicopter Regiment in South Carolina. Other positions included Commander, Headquarters and Headquarters Company and Air Operations Officer (S3 AIR) of the 51st Aviation Group.

In 1996, Colonel Kelly transferred to NGB with duty at the ARNGRC. His first assignments were as an aviation operations officer and then the aviation operations and training section chief. After three years at NGB, he reported for duty to the Department of Army Staff at the Pentagon in the Aviation Division, Office of the Deputy Chief of Staff for Operations and Plans. For the next year and a half, he served as the Army Aviation Division's fixed wing system integrator and organizational integrator.

In early 2001, Colonel Kelly became a member of the Virginia ARNG. As a testament to his experience and leadership potential, Paul Kelly was selected for command of 2nd Battalion, 224th Aviation Regiment (Assault Helicopter). From February 2001 through February 2003, he commanded the 2-224th, highlighted by a successful rotation as the Task Force Commander, Stabilization Force-10 (SFOR-10) in Bosnia-Herzegovina. Afterwards, he returned to NGB for a short tour of duty before attending the National Defense University in the summer of 2003. Upon completion of his studies, Colonel Kelly became the Chief, Aviation and Safety Division. In this capacity, he served with distinction and spearheaded a team that helped transform ARNG aviation into the best equipped and trained force in its history.

In late 2006, Colonel Kelly deployed to Baghdad, Iraq, to serve as the Chief, Reserve Component Division, Multi-National Corps-Iraq, in support of OIF. In this capacity, he represented the more than 18,000 ARNG soldiers serving in Iraq at the time. On January 20, 2007, he was killed in action when the Black Hawk in which he was riding was downed by enemy fire near Baghdad. He was 45 years of age and the highest ranking National Guard member to be killed in a combat theater during the war on terrorism.

Paul Kelly was buried in Arlington National Cemetery with full military honors on February 1, 2007. He is survived by his wife, Maria, and their two sons, Paul David and John Joseph. He was a Senior Army Aviator with over 1,500 flying hours. A devoted husband and father and dedicated soldier, his loss was felt throughout the entire ARNG aviation community.

Members of the 36th also received seventeen Distinguished Flying Cross (DFC) awards. Among the DFCs were four awarded for heroism in a single action. On December 19, 2006, TF Mustang pilots helped a team of U.S. Marines and Iraqi forces fend off an insurgent attack on their communications post in Ramadi. After three IEDs exploded and wounded several men, the Marines called for ground medical evacuation. Two AH-64s from Company B, 1-149th Aviation, though low on fuel, flew low over the area, keeping the enemy off balance and allowing ambulances to safely evacuate the wounded. As the helicopters flew close to buildings around the Marines' perimeter, they took fire from unseen snipers. Both aircraft took several hits, but as the Marines later testified, without these pilots distracting the enemy, more coalition troops would probably have been casualties.[56]

Two other Mustang members, also from Company B, 1-149th, earned DFCs for a daring feat of heroism in saving another soldier's life. While on a mission on June 30, 2007, near Ar Ramadi, two Apache crewmen heard of a critically injured soldier needing immediate medical evacuation. After a forty minute wait, no MEDEVAC aircraft had yet arrived. The AH-64 landed in close proximity to the wounded man, in an area still under intense enemy fire, and safely placed him in the front seat. The copilot/gunner, Chief Warrant Officer 2 Allen Crist, then strapped himself to the outer left forward avionics bay of the AH-64 and hung for dear life as Chief Warrant Officer 4 Kevin Purtee flew for a couple of minutes to a medical facility at Camp Ar Ramadi. The daring and quick thinking of these two

## "Easy 40"

On January 20, 2007, enemy fire north of Baghdad downed a UH-60 Black Hawk—call sign "Easy 40"—assigned to Texas' 36th CAB. The crash killed everyone on board, a total of twelve U.S. military personnel. The four crew members constituted the only 36th CAB citizen-soldiers killed in action during the brigade's tour in Iraq. A total of ten ARNG members perished, the largest group loss of Army Guard personnel in a single combat incident since the Korean War. The casualties included Col. Paul M. Kelly, the highest ranking National Guard member to be killed in a combat theater during the war on terrorism.

Two active duty soldiers died in the crash: Col. Brian D. Allgood of the 30th Medical Brigade, Heidelberg, Germany; and Cpl. Victor M. Langarica of the 86th Signal Battalion, Fort Huachuca, Arizona.

The ten ARNG members who perished included:

**Col. Paul M. Kelly**

**Lt. Col. David C. Canegata III**

**Maj. Michael V. Taylor**

**Capt. Sean E. Lyerly**

**Cmd. Sgt. Maj. Marilyn L.Gabbard**

**Cmd. Sgt. Maj. Roger W. Haller**

**Sgt. Maj. William T. Warren**

**Sgt 1st Class John G. Brown**

**Sgt. 1st Class Floyd E. Lake**

**Staff Sgt. Darryl D. Booker**

***"All Gave Some, Some Gave All"***

warrant officers definitely saved the wounded soldier.[57]

During the course of the deployment, at least 311 members of the 36th CAB were recognized for their outstanding service by the award of the Bronze Star Medal, including one to Sgt. 1st Class David L. Edington for valor in combat. The brigade also awarded eighteen Purple Hearts, four to aviators killed in action in the crash of Easy 40 and fourteen others to members of the 36th wounded in action.[58]

Apaches of the 1-149th Attack Battalion are parked in concrete revetments to shield them from mortar fragments if they are attacked. Even if one aircraft is hit, the high walls are designed to limit the extent of damage to others. *NGB-AVS*

The 36th CAB returned home in stages, starting with the 1-149th in late July 2007. Most subordinate units returned home throughout August. The last returning troops were the OSAA detachment which arrived stateside in November 2007. After TF Mustang got home, recognition of its achievements in Iraq were widespread. AAAA selected the 36th CAB as its "Outstanding Aviation Unit of the Year" for 2007, acknowledgment that citizen-soldier aviators were among the Army's best. The Army also began announcing unit awards. As of August 1, 2009, four elements of the 36th CAB had been awarded the Meritorious Unit Commendation; other elements still had recommendations pending.[59]

Morale among ARNG aviators in Iraq remained high because of the importance of their mission. Maj. Bradford Hughes (left) reenlists Sgt. 1st Class Michael Potts (right), both of the 449th Aviation Support Battalion, 36th CAB, high above Baghdad in a Black Hawk on November 10, 2006. *NGB-AVS*

## Operation Jump Start

By mid-2006, inadequate security along the Southwest border and increasing social and economic concerns over a massive flood of illegal immigration resulted in the employment of the National Guard. In a major address to the nation on the evening of May 15, President Bush spoke directly to the issue of illegal immigration. The top priority was to secure the nation's borders, and to help meet that objective, the Guard was to deploy up to 6,000 members in support of the U.S. Customs and Border Protection. The Guard was to assist in operating surveillance systems, analyzing intelligence, installing fences and vehicle barriers, building patrol roads, and providing training. Guard personnel were not to take a direct role in law enforcement—that duty would remain a Border Patrol function. Citizen-soldiers and airmen were to remain on the Southwest border for as long as two years, until the Border Patrol could permanently expand its ranks and deploy new technologies.[60]

Operation Jump Start (OJS), the U.S. Customs and Border Protection's civilian law enforcement mission to regain control over the Southwest border, was launched immediately. By August 1,

2006, the deadline the Bush administration established for having the initial OJS deployments completed, the Guard had sent 6,200 members to the border, thereby surpassing the administration's stated goal. Governors across the nation provided personnel on a rotational basis; by the autumn of 2006, forty-three states and territories had contributed manpower. Guard personnel performed a plethora of vital missions: road improvements to enhance law enforcement's mobility along the border; the installation of fences, lighting, sensors, towers, and cameras; aerial reconnaissance to facilitate the apprehension of illegal immigrants; and relieving Border Patrol agents of administrative duties so they could be reassigned to actual border protection missions. In the first year, the National Guard maintained approximately 6,000 troops along the border. That number was cut in half the second year, and steadily declined until OJS terminated in the summer of 2008.[61]

Chief Warrant Officer 3 Tim Graves, an Arizona OJS volunteer, flies an OH-58 Kiowa helicopter over Growler Mountain in southern Arizona. *Staff Sgt. Benjamin Cossel*

ARNG aviation maintained a near constant presence along the border, perhaps nowhere better than in the Grand Canyon State. Arizona's aviation component of OJS was designated TF Raven and operated primarily from the robust AASF in Phoenix. The helicopter fleet at first consisted of fourteen OH-58 Kiowas and three UH-60 Black Hawks, but the number of Black Hawks grew with increased mission requirements. In the first year, about 250 aviation personnel of all types supported the task force, a number that eventually declined to near 150 during the second year. Arizona's reliance on rotational forces was reflected in TF Raven's composition; by the end of OJS thirty-four states had provided either aircraft or personnel. Altogether TF Raven flew 13,200 flight hours with only one accident and no injuries.[62]

A UH-60 Black Hawk from Virginia's 2-224th Aviation helps to move a steel vehicle barrier into place along the border. The white obelisk at right formally marks the international border between the U.S. and Mexico. *Staff Sgt. Benjamin Cossel*

TF Raven conducted several key missions in support of border enforcement. One of its most important was observation and reconnaissance to detect illegal crossers and drug traffickers. A popular tactic was to use NVGs and FLIR to detect illegal activities after dark. Search and rescue was another essential mission, not only in support of Border Patrol agents and Guardsmen, but for illegals in need of emergency medical care as well. Black Hawks also sling loaded construction materials to engineers working at distant, inaccessible sites. Helicopters carried Border Patrol agents during observation missions because flight crews were prohibited from apprehending illegals. TF Raven's observation missions produced real results by assisting in the apprehension of 14,000 illegal crossers and the seizure of 85,000 pounds of illicit drugs.[63]

One of the principal missions of the National Guard in OJS was to help improve the Border Patrol's communications network. An important part of that mission was the installation of radio repeater towers on top of several mountains to enhance signal range and clarity. An ARNG UH-60 moves pieces of one such tower into place in 2007. *Staff Sgt. Benjamin Cossel*

Border Patrol agents always carried their own weapons aboard Guard aircraft, so TF Raven at first saw no need to arm its flight crews. However, during a night observation mission in May 2007, a Black Hawk landed near the border and dropped off its agent to pursue a ground apprehension. The pilots lifted off to return to base but soon developed an engine problem, making a forced landing in an area known for its high activity of armed smuggling. Luckily, no incident occurred that night, but afterwards at least one crew member carried a 9mm pistol.[64]

In the rugged, arid mountains of southern Arizona, high terrain often interfered with audio and video communications, thereby hindering Border Patrol operations. TF Raven employed its Black Hawks in a unique effort to install communications repeater equipment on high, inaccessible mountain peaks. Using cargo slings, Black Hawk crews lifted antennas, radio gear and other supporting materials and equipment to selected mountaintops. Once in position, signal specialists made the equipment operational, providing much improved communications. In all, TF Raven installed fifty-two repeater antennas and flew another sixty-five lift missions to put in solar and microwave antennas.[65]

In the first years of the war on terrorism, the ARNG aviation force made invaluable contributions to the nation's security. In addition to defending the homeland and conducting peacekeeping operations in Europe, ARNG aviators participated in combat in Afghanistan and Iraq. On top of all this, they performed their traditional state missions at home, personified by the response to Hurricane Katrina. Eight years into the war on terrorism, every single unit in ARNG aviation had been mobilized for either domestic or overseas duty, with many units conducting multiple deployments. As a result of such commitment, the ARNG aviation force came of age as a full partner in the Army aviation community. Any further conclusions on the extent of ARNG aviation's full contributions to the nation's defense must be made within the context of its full six decades of service.

[1] "National Guard Family Takes Time to Remember its own Sept. 11 Losses," *National Guard*, November 2001, 50.

[2] Col. George Gluski, interview with the author, Tucson, Arizona, March 14, 2009.

[3] New York National Guard, Division of Military & Naval Affairs, "Operation Trade Center: Daily Update Briefing," information briefing, September 14, 2001, 22-24.

[4] NGB-AVS, "War on Terrorism Mobilization Roster, November 1, 2001 – January 4, 2010," spreadsheet, September 15, 2009, passim; and NGB, *Annual Review*, 2005, 54.

[5] Mst. Sgt. Bob Haskell, "Winter Freeze Wrap-Up," March 22, 2005 located at http://www.northcom.mil/news/2005/032205.htm.

[6] Ibid.

[7] James W. Williams, *A History of Army Aviation: From Its Beginnings to the War on Terror* (New York: iUniverse, Inc., 2005), 379-86.

[8] Maj. David E. Wood, "TF Knighthawk: Aviation Task Force Operations in OEF," *Army Aviation*, February 29, 2004, 24-25.

[9] Ibid; and NGB, *Annual Review*, 2005, 52.

[10] "Helicopter Outfit Provides 'Air Ambulances' for War on Terror," *National Guard*, December 2002-January 2003, 33; and Tom Bearden, "National Guard Reports to Duty," transcript, *PBS Newshour*, September 22, 2005, passim.

[11] Ibid.

[12] Williams, *History of Army Aviation*, 386; and NGB, *Annual Review*, 2005, 52.

[13] "ARNG Aviation Unit of the Year: Company B, 3rd Battalion, 126th Aviation Regiment," *Army Aviation*, April/May 2009, 71.

[14] NGB, *Annual Review*, 2002, 46-49.

[15] Ibid.

[16] Ibid; and Col. Gluski, interview.

[17] Ibid.

[18] Ibid.; and NGB, *Annual Review*, 2002, 46-48.

[19] Col. Gluski, interview.

[20] Ibid.

[21] NGB, *Annual Review*, 2004, 46; and NGB, *Annual Review*, 2005, 55.

[22] NGB-AVS, "War on Terrorism Mobilization Roster," passim.

[23] Col. Gluski, interview.

[24] Ibid.

[25] Ibid.

[26] NGB, *Annual Review*, 2004, 45; and Mr. Robert E. Godwin, Deputy Division Chief, NGB-AVS, interview with the author, ARNGRC, Arlington, VA, September 10, 2009.

[27] Barton Gellman, "Frustrated, U.S. Arms Team to Leave Iraq," *Washington Post*, May 11, 2003, A1.

[28] Lt. Col. Thomas Rhatican, Commander, 1-147th Aviation, Wisconsin ARNG, interview by Maj. Annette M. Hoffman, 30th MHD, June 15, 2003, at Baghdad International Airport Aviation Base, Baghdad, Iraq, 1-4.

[29] Ibid.

[30] Williams, *History of Army Aviation*, 399-400.

[31] NGB, *Annual Review*, 2003, 199; and John J. McGrath, *Boots on the Ground: Troop Density in Contingency Operations* (Fort Leavenworth, KS: Combat Studies Institute, 2006), 113-15.

[32] NGB-AVS, "War on Terrorism Mobilization Roster," passim; and NGB, *Annual Review*, 2005, 50.

[33] Col. Bradly S. MacNealy, "Maximizing Assets, Minimizing Challenges; Quality Over Quantity; Aviation in Iraq," *Army Aviation*, February 28, 2005, 12-17.

[34] Ibid.

[35] Ibid.

[36] Ibid.

[37] NGB, *Annual Review*, 2005, 50-51; and Lt. Col. Richard P. Poole, Deputy Commander, 1108th AVCRAD, interview with the author, Gulfport, Mississippi, September 23, 2009.

[38] NGB, *Annual Review*, 2003, 33 and Appendix H, "ARNG Mobilizations by State," passim; NGB, *Annual Review*, 2005, 53-55; and Mr. Godwin, interview, September 10, 2009.

[39] Republic of Singapore, Ministry of Defence, "RADM (NS) Teo Opens the RSAF's New Chinook Training Facility," information paper, May 15, 2006, 1; Republic of Singapore, Ministry of Defence, "Inauguration of Peace Vanguard Detachment," information paper, April 19, 2006, 1; and Republic of Singapore, Ministry of Defence, "Factsheet-About Peace Vanguard Detachment," information paper, April 19, 2006, 1.

[40] Jonathan Corum, "Storm and Crisis: Immediate Need, Delayed Response," *The New York Times*, September 11, 2005, 28-29; and Mr. Godwin, interview, September 10, 2009.

[41] ARNG Directorate, "Hurricane Response After Action Review," November 2005, 16; and NGB, "National Guard Support to Hurricane Katrina," Office of Public Affairs daily updates, September 20, 2005, passim.

[42] NGB-AVS, "Katrina Aircraft Support-RW/FW/Total," briefing charts, n.d., 1-2.

[43] NGB-AVS, "Summary of Findings, Army National Guard Aviation, Hurricane Issues Conference, 17-18 November 2005, Atlanta, Georgia," conference report, February 10, 2006, "Foreword," 1-7; and Republic of Singapore, Ministry of Defence, "RSAF Helicopters Complete Hurricane Katrina Relief Operations," information paper, June 19, 2006, 1.

[44] ARNG Directorate, "Hurricane Response" 15; NGB, "Hurricane Update Brief, December 1, 2005," chart titled "National Guard Air Operations—Katrina"; and NGB, "National Guard Support to Hurricane Katrina," Office of Public Affairs daily updates, September 12 and 20, 2005, passim.

[45] Lt. Col. Poole, interview.

[46] Ibid.

[47] Ibid.

[48] Ibid.

[49] NGB-AVS, "Hurricane Issues Conference," 1

[50] Texas ARNG, 36th CAB, "De-Mobilization/Re-Deployment After Action Report, OIF 06-08," after action report, August 3, 2007, 5 and 9; and Mst. Sgt. Bob Haskell, " 'Exotic' Army Guard Aviation Unit Bound for Iraq," *On Guard*, August 28, 2006, 1.

[51] "36th CAB Aviation Training Exercise," *Army Aviation*, October 2006, 10; Karen Bradshaw, "National Guard Aviation Brigade Declared 'Fit to Fight' for Iraq Deployment," *First U.S. Army in the News*, July 30, 2006; and Phil Manson, "Combat Aviation Brigade Flies Over Pre-Deployment Hurdles," *National Guard*, July 2006, 40.

[52] 36th CAB, after action report, 11-12; Manson, "Pre-Deployment Hurdles," 40; and Staff Sgt. Lorin T. Smith, "Life in Basrah," *The Dispatch*, April 2007, 8-9.

[53] 36th CAB, after action report, 11, 13; and Staff Sgt. Lorin T. Smith, "Chinook Company Delivers," *The Dispatch*, May 2007, 12-13.

[54] 36th CAB, after action report, 28, 31; and Mst. Sgt. Charles G. Wheeler, "Apache Mechanics Receive High Marks," *The Dispatch*, January 2007, 4-5.

[55] Lt. Col. Andrew Rochstein, Commander, 449th ASB, 36th CAB, email of battle synopsis in response to research inquiry from John W. Listman, Jr., August 7, 2009. Email also included information from Chief Warrant Officer 3 Melissa Harden, S-1, 36th CAB, confirming other brigade valor awards.

[56] Staff Sgt. Lorin T. Smith, "Four 36th Combat Aviation Brigade Pilots Receive Distinguished Flying Cross for Heroism at Ramadi," May 25, 2007. Story located at http://www.ngb.army.mil/news/archives/2007/05/052507-Ramadi_heroism.aspx.

[57] Staff Sgt. Lorin T. Smith, "CAB Pilots Save Wounded Soldier," *The Dispatch*, August 2007, 8-9; and Jeff Schogol, "Not again. Not if we could help it," *Stars and Stripes*, June 14, 2009. Story located at http://www.stripes.com/article.asp?section =140&article=63224.

[58] 36th CAB, after action report, 14; and Chief Warrant Officer 3 Melissa Harden, S-1, 36th CAB, email message to John Listman confirming total number of fourteen Purple Hearts awarded for wounded, July 29, 2009

[59] "Coming Home!" *The Mustang Leader*, June 16, 2007, 14; and Lt. Col. Andrew Rochstein, Commander, 449th ASB, 36th CAB, email message to John Listman outlining which units had received the Meritorious Unit Commendation and those still pending approval, July 29, 2009.

[60] The White House, "President Bush Addresses the Nation on Immigration Reform," press release, May 15, 2006, passim.

[61] Department of Defense, "Operation Jump Start on the U.S. Southwestern Border," press briefing by Lt. Gen. H Steven Blum, July 14, 2006, passim; "President Praises Border Mission," *On Guard*, September 2006, 1, 4; and NGB JOC, "NG Military Support Operations on the SMB," daily update charts, July 24 and September 27, 2006.

[62] Maj. Perry Jones, TF Raven S-3, interview by John Listman, NGB contract historian, Phoenix, Arizona, June 3, 2008.

[63] Ibid.

[64] Ibid.

[65] U. S. Customs and Border Protection, "Operation Jump Start—Tucson Sector," information briefing, June 3, 2008, 12-14.

# CHAPTER SIX

## CONCLUSIONS

The debut of military aviation in the early twentieth century intensified the interests of state soldiers in the use of aerial platforms for military purposes. During World War II, citizen-soldier aviators participated in every aspect of air operations. In 1948 the ARNG established light aviation as an integral part of the Army's overall aviation program. Over the following six decades, ARNG aviation evolved and matured into a professional military force that made significant contributions to the nation's defense. As a state force, ARNG aviation proved invaluable in helping to preserve the lives and protect the property of the American people during domestic emergencies.

### Contributions of ARNG Aviation

In its first twenty years, citizen-soldiers organized ARNG fixed wing flying units and established a network of AASFs nationwide. While mostly individual pilots and small detachments served in the Korean War, ARNG aviation had matured to the point that a roster of organized units was first ordered to active duty during the Berlin Crisis in 1961-1962. During the same period, ARNG aviation became an indispensable part of domestic emergency response. The lack of a significant reserve

ARNG aviation played a central role in the war on terrorism by enabling the United States to direct its military power at the very heart of the enemy. A UH-60 Black Hawk from Alabama's 1-131st Aviation Assault Battalion sits on the ground in the shadow of Iraq's towering Hands of Victory monument in central Baghdad. *NGB-AVS*

Dedicated personnel remain the essential element of the ARNG aviation force. Citizen-soldiers of Kansas' 1-108th Aviation render honors during the presentation of combat patches in a ceremony at LSA Anaconda on October 30, 2006. *NGB-AVS*

component mobilization for the Vietnam War opened a gulf in the familiarity between Army and ARNG aviators. As a corporate entity, ARNG aviation in those first years was an informal affair with only limited supervision of flight operations and a checkered safety record to match.

The 1970s changed the face of the ARNG flying force. The program grew by leaps and bounds as a result of the drawdown of the Vietnam War. The debut of the Total Force Policy and the all-volunteer military set ARNG aviation on a new course by providing the manpower and machines needed to energize the entire organization. The helicopter in all its forms came to dominate the aircraft fleet, as fixed wing aircraft dwindled in their number and relative significance to the overall program. Large numbers of Vietnam veterans and the inclusion of women helped ARNG aviation to flourish at a time when manpower levels throughout the remainder of the National Guard were declining. Experienced veterans also helped to renew the bonds between active duty and state aviators. In anticipation of fighting to defend Europe against the Soviets, aviation leaders learned to train entire units, and pilots acquired new skills, such as NOE and NVG flying.

The decade of the Reagan Buildup added immeasurably to progress made in the 1970s. The expansion of defense budgets allowed modernization of the helicopter fleet with the fielding of the AH-64 and the UH-60. Realizing that the ARNG needed its own pillars of support to meet expanding training and maintenance requirements, the senior leadership moved aggressively to establish both. The result was the founding of the EAATS and WAATS and enhancements to the AVCRADs. Major joint exercises in Europe, Asia and the Middle East taught Guard aviators the methods and techniques of unit overseas deployments and brought them into closer contact with aviators in the active Army, other services and allied nations. State aviators used their experiences from domestic emergency responses to excel during humanitarian support and training missions in Latin America. All of these positive developments resulted in ARNG aviation's outstanding performance during the mobilization and conduct of the Persian Gulf War.

Events of the 1990s at home and abroad further changed ARNG aviation. The response to Hurricane Andrew set in motion planning for the massing of resources for even greater future

The war on terrorism transformed ARNG aviation into an operational force. Three AH-64 Apache helicopters of the 1-149th Attack Battalion from Texas return home to LSA Anaconda after a mission. The Texas "T Patch" symbol painted on the roof of the aircraft facility marks the building as the territory of citizen-soldier aviators. *NGB-AVS*

future regional disasters. The EMAC system emerged which allowed the states to quickly concentrate helicopters from several different states to a single disaster zone. Overseas peacekeeping missions further honed the force. As an institution, ARNG aviation learned to deploy and sustain units in peacetime during extended peacekeeping missions in the Balkans and the Middle East. Training deployments and security duty in Kuwait reinforced the lessons aviators had learned in the Persian Gulf War regarding the difficulties of flying and maintaining helicopters in the world's hottest, most arid region. At the same time, the aircraft fleet underwent modernization, with more capable aircraft replacing the AH-1 and the UH-1 of the Vietnam era.

War is always a catalyst for change, and the war on terrorism altered ARNG aviation in a number of significant ways. For the first time, ARNG aviation was fully committed to the warfight, deploying personnel and equipment that took an active role in all aspects of combat and support missions. By 2008 every single ARNG aviation unit had been mobilized for either overseas or domestic duty, with many experiencing multiple deployments. As such, ARNG aviation came of age as an equal partner in the Army aviation community, receiving unprecedented levels of support and resources. The engagement of Army Guard AH-64s in direct combat in Afghanistan and Iraq demonstrated that citizen-soldier aviators were capable of mastering the most demanding combat skills. In the same way, utility, cargo and observation helicopter units and their maintainers gained respect as a mission ready force. At home, ARNG aviators prevailed over the challenges of homeland security missions and emergency response. The American people will not soon forget the images of ARNG helicopters rescuing and delivering aid to the survivors of Hurricane Katrina in New Orleans and along the Gulf Coast in 2005.

A unique trait of ARNG aviation is that it is both a varied and a standardized force. Its variety stems from the National Guard's presence in all of the nation's fifty-four states and territories. At any one time, ARNG aviation has in its ranks air crews with diverse flight experience, from the snow-capped peaks of Alaska, to the arid deserts of the Southwest, and to the tropical islands of Hawaii and the Caribbean. On the other hand, stringent standardization in training and flight operations allows units and individuals to quickly coalesce into a coherent team. Two recent examples—Hurricane Katrina and Operation Jump Start—demonstrate the ability of ARNG aviators to seamlessly combine their efforts to good effect. By working together in uniform ways, a varied group of aviators has repeatedly demonstrated that the aggregate result of their collective efforts is much greater than the sum of their individual parts.

It is a truism among military historians and sociologists that military institutions reflect the societies from which they are drawn. One might naturally expect ARNG aviation to reflect trends and changes in the U.S. Army, and it surely has. However, the missions and composition of the ARNG aviation force have consistently and directly reflected trends and shifting attitudes in American society. State aviators live and work within local communities, giving them closer ties to the American people than any other group of Army aviators. This fact alone helps to ensure that ARNG aviation consistently reflects the broader, shifting trends in American society.

ARNG aviation was born during the early Cold War, when the nation realized protracted vigilance against communism was required. When the civil rights and antiwar movements shook the nation, state aviators became involved in quelling civil disturbances and later welcomed a more diverse group of volunteers, including women and minorities. The public's demands to end the war in Vietnam ultimately resulted in the massive expansion of ARNG aviation. When America sought to restore its national pride following the tumultuous 1970s, a bonanza of defense spending further enhanced the program. The public debate over defense spending, force reductions and the roles and missions of the military that followed the fall of the Berlin Wall in 1989 launched citizen-soldier aviators on humanitarian support and peacekeeping missions around the globe. The attacks of 9/11 riveted the public attention like no other event in recent memory. Consequently, ARNG aviation became involved in overseas campaigns, homeland security and emergency response to an unprecedented degree.

## The Generations of ARNG Aviators

Four generations of ARNG aviation volunteers have manned the force in succession since 1948. The first came from the aviator citizen-soldiers who had flown during World War II. Pilots who flew as part of the Army's light, organic aviation assigned to ground units during the war formed the core of the aviators who volunteered for National Guard service starting in 1948. These men constituted the renowned "Cub Club," named for their piloting of the L-4 Grasshopper aircraft in combat. Other military flyers from the AAF, Navy and Marine Corps with World War II experience in bombers, fighters and other types of aircraft formed the second portion of that generation. Both groups were reinforced by new volunteers who received their initial flight training at the first aviation schools established as part of the Army's embryonic aviation program. As a group, the Cub Club excelled in flying and maintaining their light, fixed wing aircraft and were the first to pioneer the use of ARNG aviation for state missions. The mobilization for the Korean War, and combat duty in that conflict, further added to the expertise of an already experienced generation of flyers.

ARNG pilots are among the best trained aviators in the world, with an outstanding record of proficient airmanship and safety. A warrant officer from the Pennsylvania ARNG goes through a CH-47 checklist prior to flight. *Pennsylvania National Guard*

The Cub Club generation sustained ARNG aviation until the debut of the Vietnam generation in the early 1970s. Vietnam flyers brought with them a vast amount of skill in rotary wing aircraft, including combat experience. This second, larger generation enabled and sustained the explosive growth in ARNG aviation that occurred throughout the 1970s, especially in rotary wing aircraft. During their ARNG service, the Vietnam generation flew those helicopters they had first experienced in Southeast Asia: the AH-1 Cobra, the UH-1 Iroquois, the OH-6 Cayuse and the CH-47 Chinook. A key contribution of the Vietnam generation was that it readily adapted the helicopter, especially the UH-1, to state missions. Vietnam veterans, albeit in declining numbers, dutifully remained in the ranks, serving in the Persian Gulf War, Afghanistan and Iraq. Most adapted to new aircraft, such as the UH-60 and AH-64, while others maintained their preference for the venerable Huey.

A third generation of ARNG aviators first emerged during the Reagan Buildup that saw the debut of the UH-60 and the AH-64. They managed the challenges that occurred with the end of the Cold War and the decade of uncertainties that followed. Force modernization began in earnest during their tenure, with the ARNG aircraft fleet shrinking in total numbers as more modern and capable aircraft were acquired. At the same time, they helped to establish a network of premier training and maintenance sites, including the EAATS, WAATS and the AVCRADs. While conducting the standard battery of state missions, they provided special aviation support to the counter-drug war. Members of this generation participated in more overseas training exercises and operational deployments than any previous generation. They manned the array of aviation assets mobilized for the Persian Gulf War and subsequent peacekeeping operations in Somalia, Haiti, Latin America, the Balkans and the Middle East. The Reagan Buildup generation of aviators—backed by their families and employers—proved they could sustain extended, significant overseas deployments in peacetime.

A fourth generation has come of age during the war on terrorism. They have mastered the techniques of deploying and participating in combat and support operations throughout the Middle East. Whether in the cockpit or on the maintenance shed floor, ARNG personnel have learned to "keep 'em flying" through the most adverse conditions of combat, weather and terrain. By triumphing in battle, they have proven themselves a full partner with Army aviators on active duty. At the same time, they embraced new homeland security missions. A distinguishing characteristic of this latest generation is that they are comfortable in rapidly transferring aircraft and personnel from one state to another in order to mass for security missions or disaster response. They will be long remembered for their conduct in 2005 when Hurricane Katrina prompted the National Guard's largest response ever to a natural disaster. Combat experience and demonstrated skill in conducting state missions are at an all-time high among the present generation, and from their ranks will emerge the next iteration of senior leadership, not only for ARNG aviation, but for NGB and the states as well.

## ARNG Aviation in State Missions

A unique characteristic of ARNG aviation is that unlike other segments of the Army flying community, it has always been heavily involved in state missions. Not long after the debut of light, fixed wing aircraft in the ARNG following World War II, the states realized the inherent advantages of aviation during natural disasters and in bolstering law enforcement. The helicopter—first the H-13 Sioux, then the UH-1 Iroquois, and finally the UH-60 Black Hawk—was also quickly adapted to state missions. Only aviation had the ability to arrive rapidly at the scene of a crisis and render timely, accurate information by radio to senior civilian and military authorities. During situations of social unrest and lawbreaking, Army Guard aviators have backed law enforcement until

The experience and proficiency of ARNG aircraft maintenance personnel have become legendary across the entire U.S. Army. The busy shop floor of the 1108th AVCRAD in Gulfport, Mississippi, testifies to the maintenance load that the rotary wing aircraft fleet requires. *Michael Doubler*

their assistance is no longer necessary. Aircraft have also excelled in rescue missions, whether during natural or manmade disasters. ARNG helicopters have rightly earned a reputation as angels of mercy in disaster situations as they evacuate the injured and deliver food, water, medicine and other needed supplies.

Unlike combat operations, state missions have no established military doctrine or tactics. Still, aviators have excelled during domestic emergencies. They have done so based on a broad understanding of what was needed, knowledge derived from the National Guard's long history of disaster response and military support to civil authorities. Relying on their combat training and their own personal experiences, ARNG aviators have adapted to meet the varied demands of state missions, especially in a new era of increased homeland security missions. Hurricane Andrew in 1992 had previously set the standard for emergency preparedness; Katrina shattered that barrier and set a new, higher benchmark for future emergencies of even greater magnitude. In an era of terrorism, aviators have also learned that a successful emergency response is measured in hours, not days.

Aviators have often performed state missions nearly simultaneous with their federal missions. During 2001-2008, it was not unusual for the ARNG aviation force in a single state to have aircraft and personnel deploy to Afghanistan and Iraq, while those remaining at home helped to battle wildfires, recover from storms, participate in counter-drug activities, defend the nation's

borders and assist state and local law enforcement in any different number of military support missions. ARNG flying units and personnel just returned from Afghanistan and Iraq deftly deployed to the Gulf Coast for Hurricane Katrina. Similarly, those ARNG aviators just returned from arid combat zones in the Middle East easily adapted to duty along the Southwest border during OJS.

## ARNG Aviation -Today and Tomorrow

As the first decade of the twenty-first century comes to a close, the ARNG aviation force is perhaps in better shape than at any time in its history. From its headquarters at the ARNGRC in Arlington, Virginia, NGB-AVS provides national policy on the allocation and distribution of resources to meet the objectives of the various aviation programs. A newly established operations center within NGB-AVS will further expedite aviation's immediate response during emergencies. A national ARNG aviation contingency plan—Operation Busted Windsock—has been established to deploy air crews and helicopters in anticipation of expected storms. In the states, SAAOs perform staff and planning functions for their assigned units and advise the TAGs on aviation matters. A network of AASFs supports flight operations and maintenance nationwide. A robust system of regional training sites—EAATS, WAATS, FWAATS and HAATS—exists to perform essential training. Four regional AVCRADs provide support on a regional basis, forming the backbone of the national aviation maintenance effort.

The ARNG aircraft inventory continues to evolve. As 2009 comes to a close, the fleet includes 1,397 aircraft of all types. The number of newer models of the AH-64 and UH-60 continues

ARNG aviation will remain an essential force during domestic emergencies and other state missions.
A UH-60 tops off at a remote operating location during the response to Hurricane Katrina, 2005. *NGB-AVS*

# UH-72 Lakota

The UH-72 Lakota light utility helicopter (LUH) is the Army's newest addition to its helicopter fleet. On June 30, 2006, the U.S. Army awarded a contract for the production and contractor logistics support of the LUH to EADS North American Defense of Arlington, Virginia. The acquisition of the UH-72 was made possible through the deliberate reinvestment of monies made available by the cancellation of the Comanche helicopter in 2004.

The UH-72 is a commercial aircraft adapted to military use and designed to conduct light general support tasks in permissive, non-combat environments. Those tasks include civil search and rescue, personnel recovery, evacuation, counter-drug and limited civil command and control operations in the conduct of homeland security. With a crew of two, the Lakota can carry eight additional personnel or two stretchers with accompanying medical personnel. Its useful load amount is just below 4,000 pounds. The UH-72 has a maximum speed of 167mph, a maximum range of 426 miles and a service ceiling of 18,000 feet. A very efficient aircraft, the LUH can perform support missions at roughly half of the flying hour cost of the UH-60.

At the end of 2009, the ARNG has already received thirty-eight Lakotas and is programmed to receive approximately two thirds of the 345 LUHs the Army will purchase. Others will go to non-combat, support organizations throughout the Army. The first Lakotas were fielded at the National Training Center, Fort Irwin, California, for medical evacuation missions in January 2007. UH-60 Black Hawks that are replaced by UH-72s in active Army organizations will be transferred to the ARNG for further use.

to increase. The ARNG aircraft fleet passed a significant milestone in October 2009 with the retirement of the last UH-1 assigned to an operational unit. The retirement of the last Huey, which has been in continuous ARNG service since the early 1970s, marks the end of an era. However, older aircraft are being replaced by newer, more capable aircraft, and the new UH-72 Lakota is being fielded in increasing numbers to do those missions once performed by the Huey. Another addition to the aircraft fleet, the Shadow 200 RQ-7 tactical unmanned aircraft system, shows great promise for both combat and domestic uses.

If history is any indicator, several past trends will certainly shape the future force. Citizen-soldier aviators have always sought to exploit new technology, and the aviation force will continue to leverage information technology, simulators and unmanned aerial systems to their advantage. In due time, a new generation of Army rotary and fixed wing aircraft will emerge, and ARNG aviators will be eager to acquire and master the most modern aircraft available. ARNG aviation has always sought to support itself, and one should expect future training and maintenance enhancements at the regional training sites and at the AVCRADs.

ARNG aviation will continue its federal mission of providing ready units in wartime and its state mission of supporting civil authorities during domestic emergencies. The Total Force Policy has been a boon in strengthening the ties between active duty and citizen-soldier aviators and in providing necessary resources. Still, the ARNG senior leadership in the future must ensure that citizen-soldier aviators have the funds, training and equipment necessary to make them an effective operational force. In the same manner, aviation needs those resources required to preserve the lives and protect the property of the American people at home. This challenge could become especially problematic if the nation encounters another period when other social and fiscal priorities trump defense spending.

Since its creation in 1948, ARNG aviation has developed a reputation for excellence in airmanship, maintenance, safety and training. Its standing as a citizen-soldier combat reserve and domestic response force is second to none. Buttressed by the lessons and traditions of the past, the winged warriors of ARNG aviation will forever remain a vital part of the nation's first line of defense.

The end of an era. Brig. Gen. Alberto Jimenez, the Deputy Assistant Adjutant General of Maryland, speaks at Fort Myer, Virginia, upon the retirement of the Army's last operational UH-1 Huey on October 2, 2009. *National Guard Bureau*

# Army Aviation Association of America ARNG Aviation Unit of the Year Recipients

**BACKGROUND** – During the period 1969-1984, AAAA presented an "Outstanding Reserve Component Aviation Unit Award" that recognized annual outstanding unit accomplishments within the Army National Guard and U.S. Army Reserve. The award was won by ARNG aviation units in fourteen of the sixteen years in which it was presented. In late 1985, the Association established separate "Aviation Unit Awards" for both the Army Guard and the Army Reserve.

**1969 - 1105th Aviation Company (Assault Helicopter) Iowa-ARNG**, MAJ Robert C. Cummings, Commander, & 1SG Arnold J. Newsum, Senior NCO.
**1970 - 24th Medical Company (Air Ambulance) Nebraska-ARNG**, MAJ Roger W. Fosbender, Cdr & 1SG Andrew M. Alexander, Senior NCO.
**1971 - 997th Aviation Co. (Assault Helicopter) Arizona-ARNG**, MAJ James H. Cowan, Cdr, & 1SG Dale S. Swensen, Senior NCO.
**1972 - 307th Aviation Co. (Heavy Helicopter) Alabama-ARNG**, MAJ Arthur E. Fleet, Commander, & 1SG John F. Hoskins, Senior NCO.
**1973 - 445th Aviation Company (Assault Helicopter) Oklahoma-ARNG**, MAJ Karl M. Frank, Commander, & 1SG Kenneth Inman, Senior NCO.
**1974 - 536th Aviation Co. (Assault Support Helicopter) Texas-ARNG**, MAJ Joe E. Harry, Commander, & SGT Joseph Kimball, Senior NCO.
**1975 - 1042nd Military Intelligence Company (Aerial Surveillance) Oregon-ARNG**, MAJ Loren W. Franke, Commander, & 1SG Donald MacPherson, Senior NCO.
**1976 - 300th Aviation Co. (Assault Helicopter) Texas-USAR**, MAJ Jerry Stokely, Commander, & 1SG Jack Powell, Sr. NCO.
**1977 - Troop E, 19th Cav/29th Brigade, Hawaii-ARNG**, MAJ Bernard M. Watson, Commander, & MSG Richard Y. Tabe, Senior NCO.
**1978 - 49th Transportation Company (Medium Helicopter) California-ARNG**, MAJ Lawrence Faller, Commander, & 1SG Sidney G. Richards, Senior NCO.
**1979 - Brigade Aviation Section, HHC, 92d Sep. ID Puerto Rico-ARNG**, CPT Anibal Torres, Commander, & 1SG Hector Doran, Senior NCO.
**1980 - 190th Aviation Company (Medium Helicopter) Kansas-ARNG**, MAJ Thomas A. Staadt, Commander, & 1SG Paul M. Green, Senior NCO.
**1981 - 717th Medical Detachment, New Mexico-ARNG**, MAJ George B. Faulhaber, Commander, & SFC Nancy J. Reutner, Senior NCO.
**1982 - 138th Aviation Company (EW), Florida-USAR Orlando, Florida**, MAJ Arthur S. Johnson, Commander, & SFC James E. Dennis, Senior NCO.
**1983 - D Company, 28th Combat Aviation Battalion, North Carolina-ARNG**, MAJ Julius H. Avant, Commander, & 1SG Thomas W. Keyes, Senior NCO.
**1984 - 40th Combat Aviation Battalion, California-ARNG**, LTC James Ghormley, Commander, & CSM William J. Selling, Senior NCO.
**1985 - Company C, 26th Aviation Battalion, Florida Army National Guard**, MAJ David J. Cook, Commander, & 1SG Billy R. Cowart, Senior NCO.
**1986 - 45th Aviation Battalion (Light Helicopter Combat), Oklahoma Army National Guard**, LTC Leroy A. Wall, Commander, & MSG Charles B. Connell, Senior NCO.

**1987 - 1st Battalion, 111th Aviation (AH) Florida Army National Guard, Jacksonville, FL**, LTC Donald L. Adkison, Commander & SGM Billy R. Cowart, Senior NCO.
**1988 - 1st Battalion, 130th Aviation Regiment, - 449th Avn Group, Morrisville, NC**, LTC Duncan M. Stephens, Commander, & CSM Clarence L. Hodges, Senior NCO.
**1989 - 1st Battalion, 131st Avn Regt., 167th Support Command (Corps), Montgomery, AL**, LTC Don E. Stagg, Cdr., & CSM Harold M. Johnston, Senior NCO.
**1990 - Company G, 3rd Battalion, 149th Aviation Regiment, Texas Army National Guard, Grand Prairie, Texas**, MAJ Richard B. Keene, Commander, & 1SG Thomas B. Lewis, Senior NCO.
**1991 - 1109th Aviation Classification & Repair Depot, Mobilization AVCRAD Control Element, Connecticut Army National Guard, Groton, Connecticut** COL Paluel J. Flagg, II, Commander, and CSM George H. Allard, Jr., Senior NCO.
**1992 - 1st Battalion (Attack Helicopter) 211th Aviation Regiment, Utah Army National Guard, West Jordon, UT**, LTC Robert G. Holt, Commander & CSM Travis R. Heywood, Senior NCO.
**1993 - 1st Battalion, 106th Aviation Regiment, Illinois Army National Guard, Peoria, IL**, LTC Michael A. Marvin, Commander & CSM Frederick A. Lane, Senior NCO.
**1994 - Company G, 3rd Battalion, 140th Aviation Regiment, California Army National Guard, Stockton, CA**, MAJ Kevin B. Keenan, Commander & 1SG Charles M. Chiasson, Senior NCO.
**1995 - 1st Battalion, 111th Aviation Regiment (Attack Helicopter), Florida Army National Guard, Jacksonville, FL**, LTC David W. Starr, Commander & CSM Gary L. Wingard, Senior NCO.
**1996 - 1st Battalion, 151st Aviation Regiment (Advanced Attack Helicopter), South Carolina ARNG**, LTC Earl M. Yerrick, Jr., Commander & CSM George E. Dorr, Senior NCO.
**1997 - 126th Medical Company (AA), California Army National Guard**, MAJ Manuel Anthony Lascano, Commander & 1SG Eugene Joe Baker, Senior NCO.
**1998 – 1-130th Aviation Attack Helicopter Battalion (ATKHB), North Carolina Army National Guard**, LTC Irvin R. Blackmon, Commander & CSM John T. Gattis, Senior NCO.
**1999 – 24th Medical Company (Air Ambulance), Nebraska Army National Guard**, CPT Rick Dahlman, Commander & 1SG Troy Johnson, Senior NCO.
**2000 – 1-189th Aviation Battalion (CSAB)**, LTC Kevin M. Kepler, Commander & CSM Kent C. Robinson, Senior NCO.
**2001 – 1st Battalion, 207th Aviation, Anchorage Readiness Center**, LTC Jerry Kidrick, Commander & CSM Dennis Roggenkamp, Senior NCO.
**2002 – 1042 Medical Company (Air Ambulance), Oregon Army National Guard**, MAJ Mathew J. Brady, Commander & 1SG David Walsh, Senior NCO.
**2003 – G Company, 104th Aviation Regiment, Pennsylvania and Connecticut Army National Guard**, MAJ David Ernest Wood, Commander & 1SG Dell Lynn Christine, Senior NCO.
**2004 – Task Force Pirate (1st Bn 211th Avn Rgt, C-25 (AVIM), C2-25, E2-25, F2-25 (AVUM), B-214, Det 42 OSA, Det 2 B Co 2-228)**, LTC Rodney Scott Robinson, Commander & CSM Gary Charles Stearman, Senior NCO.
**2005 – 1st Battalion, 126th Aviation Regiment, Rhode Island National Guard**, COL Christopher P. Callahan, Commander & CSM Robert Fortin, Senior NCO.
**2006 – 2nd Battalion, 224th Aviation Regiment**, LTC Robert E. McMillin II, Commander & CSM Susan Bentley, Senior NCO.
**2007 – 2nd Battalion, 135th Aviation Regiment, Colorado Army National Guard**, LTC Christopher J. Petty, Commander & CSM Douglas Imfeld, Senior NCO.
**2008 – Company B, 3rd Battalion, 126th Aviation Regiment**, MAJ William C. Hummer, Commander & 1SG Gregory Kecken, Senior NCO

# Division Chiefs
# ARNG Aviation and Safety Division

The Division Chief, ARNG Aviation and Safety Division (NGB-AVS) is the senior executive responsible for coordinating the resourcing, equipping and training of ARNG rotary wing aviation assets in the fifty-four states and territories and is the ARNG's lead proponent for both ground and aviation safety. Between 1974 and 1996, the division was named the ARNG Aviation Division (NGB-AVN), changing its name in 1996 to the ARNG Aviation and Safety Division (NGB-AVS). The following individuals have served as Division Chief from 1974 to the present:

**Col. Charlie Jones, 1974-1977**
Colonel Jones served as the SAAO for Oklahoma and was called to Washington, DC, to become the first head of the Aviation Division by the CNGB at the time, Lt. Gen. Laverne Weber, also an Oklahoman. Charlie Jones organized and led the first division operations at Building 4430 at Edgewood, Maryland.

**Mr. John J. Stanko, Jr., 1977-1993**
Known as the "Father of ARNG Aviation," Mr. Stanko was the longest serving ARNG Aviation Division Chief in ARNG aviation history. Previously, he had served as the head of the Aviation Logistics Office, the precursor of the Aviation Division. During his tenure, the division staff moved from the main cantonment area at Edgewood, Maryland, to the OAC on a former Nike missile site on the perimeter of the Edgewood Area of Aberdeen Proving Ground.

**Col. Ron Rendy, 1993**
An Oregon ARNG aviator, Colonel Rendy served temporarily as the Division Chief when the Aviation Division relocated from Edgewood, Maryland, to its new home in the ARNGRC in Arlington, Virginia.

**Col. Joe Ferreira, 1993-1999**
The former SAAO of New York, Colonel Ferreira became Division Chief at a time when force reductions throughout the ARNG began in earnest. Major challenges were the loss of the aviation brigades assigned to two inactivated combat divisions in the Northeast and the resulting shuffle of aviation force structure among the states. His tenure also saw considerable turbulence, with the modernization of the aircraft fleet and reductions in the total number of aircraft.

**Mr. Alberto Jimenez, 1999-2001**
A Vietnam veteran who had flown the AH-1 in combat, Alberto Jimenez had served in the ARNG Aviation Division since 1981, specializing in aviation logistics and systems management. His vast experience at the unit, state and NGB levels, including senior command experience, made him one of the best qualified individuals to ever hold the position as Division Chief, NGB-AVS. Afterwards, he was promoted to the rank of brigadier general and served as the assistant TAG of Maryland.

**Col. George Gluski, 2001-2004**
Colonel Gluski was serving as Division Chief when the attacks of 9/11 occurred. A Vietnam veteran, he is a recipient of the Distinguished Flying Cross. He had formerly been the commander of the WAATS in Marana, Arizona, and the ARNG senior advisor to the commanding general at Fort Rucker. During his tenure, the ARNG aviation force applied itself fully toward the campaigns in Afghanistan and Iraq and with homeland security missions.

**Col. Paul Kelly, 2004-2006**
Colonel Kelly brought to his position extensive experience as a staff officer at NGB and on the Army Staff in the Pentagon. He commanded 2nd Battalion, 224th Aviation Regiment (Assault Helicopter), from February 2001 until February 2003, including a successful rotation as the Task Force Commander, SFOR-10 in Bosnia-Herzegovina. After serving as Division Chief, Colonel Kelly served as the Chief, Reserve Component Division, Multi-National Corps-Iraq. He was killed in action in Iraq on January 20, 2007, when the Black Hawk helicopter in which he was riding was downed by enemy fire.

**Col. Jackie L. Reaves, 2006-2008**
Colonel Reaves brought extensive experience with him as an operator and staff officer at both the state and NGB level in the counter-drug program. In July 2003, he was assigned as the commander, Operational Support Airlift Command, and the following year was elevated to become commander of OSAA.

**Col. Garrett P. Jensen, 2008-Present**
After serving nine years on active duty, Colonel Jensen joined the Louisiana National Guard in 1993. As a senior aviation staff officer in Louisiana, he organized the improvised heliport at the Louisiana Superdome as New Orleans flooded in the first days following Hurricane Katrina's passage. Afterwards, he was assigned to the ARNGRC. He is a veteran of the Persian Gulf War, the Iraq War and the Hurricane Katrina relief effort, commanding at the troop, company and battalion levels. Colonel Jensen is a rated pilot on the UH-1, OH-58, AH-1F and AH-64A, and an IP on the UH-60.

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| AA | Air Ambulance |
| AAAA | Army Aviation Association of America |
| AAF | Army Air Forces |
| AASF | Army Aviation Support Facility |
| AAT | Army Aviation Transformation |
| ACR | Armored Cavalry Regiment |
| ADMRU | Aviation Depot Maintenance Roundout Unit |
| AGF | Army Ground Forces |
| AGR | Active Guard and Reserve |
| ANG | Air National Guard |
| ARI | Aviation Restructure Initiative |
| ARMS | Aviation Reconfigurable Manned Simulator |
| ARNG | Army National Guard |
| ARNGRC | ARNG Readiness Center |
| ARTEP | Army Training and Evaluation Program |
| AT | Annual Training |
| ATC | Air Traffic Control |
| AVCATT | Aviation Combined Arms Tactical Trainer |
| AVCRAD | Aviation Classification Repair Activity Depot |
| CAB | Combat Aviation Brigade |
| CNGB | Chief, NGB |
| CONUS | Continental United States |
| DARNG | Director, ARNG |
| DFC | Distinguished Flying Cross |
| EAATS | Eastern ARNG Aviation Training Site |
| EMAC | Emergency Management Assistance Compact |
| FWAATS | Fixed Wing ARNG Aviation Training Site |
| FLIR | Forward-Looking Infrared |
| FOB | Forward Operating Base |
| HAATS | High-altitude ARNG Aviation Training Site |
| IED | Improvised Explosive Device |
| IP | Instructor Pilot |
| JFHQ | Joint Force Headquarters |
| KFOR | Kosovo Force |
| LSA | Logistical Support Area |

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|---|---|
| MACE | Mobilization AVCRAD Control Element |
| MEDEVAC | Medical Evacuation |
| NATO | North Atlantic Treaty Organization |
| NGB | National Guard Bureau |
| NGB-ARL | ARNG Logistics Division |
| NGB-ARO | ARNG Operations Division |
| NGB-AVN | ARNG Aviation Division |
| NGB-AVS | ARNG Aviation and Safety Division |
| NOE | Nap of the Earth |
| NVG | Night Vision Goggle |
| OAC | Operating Activity Center |
| OEF | Operation Enduring Freedom |
| OJF | Operation Joint Forge |
| OJS | Operation Jump Start |
| OIF | Operation Iraqi Freedom |
| OR | Operational Readiness |
| OSAA | Operational Support Airlift Agency |
| PW | Prisoner of War |
| RAID | Reconnaissance and Aerial Interdiction Detachment |
| REFORGER | Return of Forces to Germany |
| RCT | Regimental Combat Team |
| RPG | Rocket Propelled Grenade |
| SAAO | State Army Aviation Officer |
| SF | Special Forces |
| SFOR | Stabilization Force |
| SOAR | Special Operations Aviation Regiment |
| TARS | Transportation Aircraft Repair Shop |
| TAG | The Adjutant General |
| TF | Task Force |
| TOE | Table of Organization and Equipment |
| USAACE | U.S. Army Aviation Center of Excellence |
| USAF | U.S. Air Force |
| USAR | U.S. Army Reserve |
| WAATS | Western ARNG Aviation Training Site |

**Publications**

*Army Aviation*, 1959-2009. *Army Aviation* magazine is the official publication of the Army Aviation Association of America (AAAA).

Doubler, Michael D. *Civilian in Peace, Soldier in War: The Army National Guard, 1636-2000.* Lawrence, KS: University Press of Kansas, 2003.

LePore, Herbert L. *History, Heraldry and Spirit of United States Army Aviation.* Fort Rucker, AL: U.S. Army Aviation Center and Fort Rucker, n.d.

*National Guard*, 1947-2009. *National Guard* magazine is the official publication of the National Guard Association of the United States (NGAUS).

National Guard Bureau, Office of the Chief. Annual Review, 1947-2005.

National Guard Bureau, Office of Public Affairs. On Guard, 1990-2009.

Raines, Edgar F., Jr. *Eyes of Artillery: The Origins of Modern U.S. Army Aviation in World War II.* Washington, DC: U.S. Army Center of Military History, 2000.

*U.S. Army Aviation Digest.* "Aging Saber Sharpening for War: ARNG Aviation of the 1980s." Feature Edition. November 1981.

------. "Army National Guard Aviation." Feature Edition. July/August 1989.

------. "Army National Guard Aviation Force Projection." Feature Edition. January/February 1995.

Williams, James W. *A History of Army Aviation: From Its Beginnings to the War on Terror.* New York: iUniverse, Inc., 2005.

**Oral History Interviews**

Maj. Gen. Raymond F. Rees, TAG, Oregon
Maj. Gen. Jessica L. Wright, TAG, Pennsylvania
Brig. Gen. Alberto J. Jimenez, Asst. TAG, Maryland
Lt. Col. Richard P. Poole, Deputy Commander, 1108th AVCRAD
Mr. Robert E. Godwin, Deputy Division Chief, NGB-AVS
Mr. Tom Petrick, program analyst, NGB-AVS
Mr. Ray Engstrand, program analyst, NGB-AVS

Mr. John J. Stanko, Jr., former Division Chief, NGB-AVN
Mr. Al Marshal, former Deputy Division Chief, NGB-AVN
Brig. Gen. Robert G. "Toobee" Johnson (Ret.), former Commander, 1108th AVCRAD
Col. Bill Badger (Ret.), former commander of EAATS and WAATS
Col. George Gluski (Ret.), former Division Chief, NGB-AVS

## *About the Author*

Dr. Michael D. Doubler is a nationally recognized expert on the history of America's citizen-soldiers. He served twenty-three years on active duty as a Regular Army and full-time Army National Guard officer. He is a graduate of the U.S. Military Academy at West Point, New York, and holds a doctorate degree in military history from The Ohio State University. He was assigned to the National Guard Bureau in Washington, D.C. from 1988 to 2000, serving as a staff officer and as a speechwriter for the Chief, National Guard Bureau. His service as a full-time Army National Guard officer began in 1991 and was completed with his retirement in 2000. Since then, he has headed Doubler Enterprises, a writing and research firm located in Washington, D.C.

Mike Doubler previously authored *Closing With the Enemy: How GIs Fought the War in Europe, 1944-1945*, which is included on the Chief of Staff of the Army's professional reading list. He is also the author of *Civilian in Peace, Soldier in War: The Army National Guard, 1636-2000*, which has been hailed as the definitive history of the Army Guard. He has recently completed The National Guard and the War on Terror, an official history in three volumes covering the actions of citizen-soldiers and airmen from the attacks of 9/11 through current operations in Iraq and Afghanistan. His latest book —*The National Guard and Reserve: A Reference Handbook*—is an entry in the respected Praeger Security International series. Colonel Doubler has appeared on several national radio and television news venues. He currently resides in Murfreesboro, Tennessee.

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